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1884/85

ANNUAL REPORT

AND

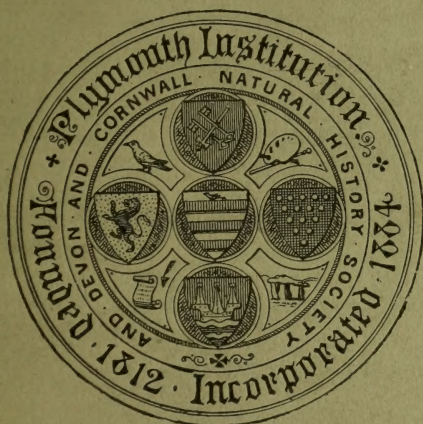
TRANSACTIONS

OF THE

PLYMOUTH INSTITUTION

AND

Debon & Cornwall Natural History Society.



VOL. IX. PART I. 1884-85.

PLYMOUTH:

W. BRENDON AND SON, GEORGE STREET.

1885.

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"ERRATA IN ROTATION."

SYNOPSIS OF PAPER BY MR. R. W. WOOLLCOMBE.

Page 379, line 5 from bottom of page, for "rotations" read "rotation."

Page 380, line 6, for "impressed" read "improved."

ANNUAL REPORTS
OF THE
PLYMOUTH INSTITUTION
AND
Devon and Cornwall Natural History Society.

OFFICERS OF THE INSTITUTION.

SESSION 1884-85.

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MR. D. SLATER, M.A.

Vice-Presidents.

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Invertebrates—{ MR. G. C. BIGNELL, M.E.S. MR. F. BRENT.
MR. F. F. FREEMAN. MR. R. N. WORTH, F.G.S.

Botany—MR. D. D. DOBELL.

Mineralogy—DR. R. OXLAND, F.C.S. *Geology*—MR. F. J. WEBB, F.G.S.

Petrology—MR. R. N. WORTH, F.G.S.

LIST OF MEMBERS.

HONORARY MEMBERS.

Elected.	Name.	Address.
1865	Adams, J. C., D.C.L., F.R.A.S.	The Observatory, Cambridge.
1877	Beal, Rev. Professor, B.A., M.R.A.S.	Wark Rectory, Hexham.
1874	Froude, James Anthony, M.A.	5, Onslow Gardens, London, W.
1859	Gibbs, F. W., C.B., 24, Mount Street,	Grosvenor Square, London, W.
1877	Günther, Dr. A., F.R.S., F.L.S., F.Z.S.,	British Museum, London.
1865	Lubbock, Sir John, Bart., D.C.L., F.R.S., F.L.S.,	High Elms, Kent.
1874	Pengelly, W., F.R.S., F.G.S.	Lamorna, Torquay.
1859	Scrivener, Rev. F. H. A., M.A., LL.D.,	Hendon, Middlesex.
1875	Temple, Right Rev. Dr., Bishop of London,	The Palace, Fulham.
1865	Vivian, Edward, M.A.	Torquay.
1872	Weymouth, R. F., D.LIT.	Mill Hill, London.
1872	Worth, R. N., F.G.S.	4, Seaton Road.

LIFE MEMBERS.

1855	Alger, J.	Sydney, Australia.
1863	Alger, W. H.	Widely Court, near Plymouth.
1856	Bartlett, G.	Plymouth.

CORRESPONDING MEMBERS.

1856	Harding, Col., F.G.S.	Upcott, Barnstaple.
1858	Ormerod, G. W., M.A., F.G.S.	Woodway, Teignmouth.
1858	Peach, C. W., A.L.S.	30, Haddington Place, Edinburgh.
1863	Vicary, W., F.G.S.	Exeter.

LECTURING MEMBERS.

1868	Adams, W.	Frankfort Street.
1881	Aldridge, Charles, M.D.	Plympton House, Plympton.
1860	Anthony, Rev. Professor, M.A.	13, Woodland Terrace.
1884	Babb, H. R.	21, Portland Square.
1858	Balkwill, Francis Hancock	Princess Square.
1882	Bampton, Augustus H., M.D.	North Devon Place.
1852	Bate, C. Spence, F.R.S.	Mulgrave Place.
1884	Batten, J. Maxwell	Plymouth College, Ford Park.
1863	Bennett, E. G.	10, Woodland Terrace.
1826	Bennett, J. N.	Windsor Villas.
1884	Bignell, George C., M.E.S.	8, Clarence Place, Stonehouse.
1877	Bird, Rev. Benwell	Wychbury, Fernleigh Road.
1861	Brent, Francis, F.S.A.	19, Clarendon Place.
1862	Briggs, Thomas Rider Archer, F.L.S.	Fursdon, Knackersknowle, near Plymouth.

LECTURING MEMBERS—*continued.*

Elected.	Name.	Address.
1882	Brugmann, O. W. R.	3, Hyde Park Road.
1884	Buchan, W. A., M.B.	South Devon Hospital.
1881	Burnard, Charles F.	Chatsworth Lodge, Compton Park Road.
1851	Cater, Samuel	North Devon Place.
1876	Chapman, Rev. Professor, M.A.	Western College, Tavistock Road.
1880	Clarke, Edward, M.P., Huntingdon Lodge, Peckham Road, London.	
1853	Collier, Sir R. P.	Eaton Place, London.
1851	Collier, W. F.	Woodtown, Horrabridge.
1876	Collier, Miss Bertha Cycill	Woodtown, Horrabridge.
1876	Collier, Charles Calmady	Woodtown, Horrabridge.
1884	Collier, G. B., B.A.	Woodtown, Horrabridge.
1867	Collier, Robert	7, Chelsea Embankment, London.
1877	Coney, Rev. Thomas, M.A.	4, Wingfield Villas, Stoke.
1883	Darby, Rev. W. Evans	13, Mulgrave Street.
1882	Debnam, Alfred R.	10, Higher Portland Place, Stoke.
1884	Dickson, Rev. W., LL.D.	53, Haddington Road, Stoke.
1884	Dobell, Douglas, D.	1, Auburn Place.
1884	Edlin, Edward Holberton, M.R.C.S. ENG., F.R.C.S. EDIN., 1, Braidwood Ter.	
1880	Edmonds, Robert G.	Mount Drake.
1882	Evans, H. Montague	8, South Devon Place.
1884	Evans, Rev. G., M.A.	8, Washington Terrace, Alexandra Road.
1884	Evans, Godfrey	4, Rochester Terrace.
1874	Fouracre, John T.	Chapel Street, Stonehouse.
1875	Fox, Francis E., B.A., F.R.G.S.	Uplands, Tamerton Foliot.
1868	Fox, R. R.	Westbrook, Tamerton.
1884	Freeman, Francis Ford	Leigham Terrace.
1851	Harper, T., M.R.C.S.	1, Gibbon Street.
1852	Hine, James, F.R.I.B.A.	Mulgrave Place.
1867	Hingston, C. Albert, M.D.	2, Sussex Terrace.
1875	Hughes, R. H., M.A., M.B., M.R.C.S.	12, Lockyer Street.
1876	Inglis, James C., C.E.	1, Buckland Terrace.
1881	Inskip, Capt. G., R.N., F.R.G.S.	Torrington House, North Road.
1868	Jackson, George, F.R.C.S.	1, St. George's Terrace.
1851	Jago, George	Cobourg Street.
1882	Jago, C. S., F.R.G.S.	Cobourg Street.
1882	Jewers, Arthur J., F.S.A.	7, Nottingham Place, Mutley.
1883	Jewers, Ernest E., L.D.S., LOND.	3, Athenæum Terrace.
1880	Macliver, Peter Stewart, M.P.	Ardnave, Weston-super-Mare.
1874	Merrifield, John, LL.D., F.R.A.S., F.M.S.	Gascoyne Place.
1862	Mitchell, Philip	Bedford Terrace.
1851	Moore, W. Foster	The Friary.
1870	Morley, The Right Hon. the Earl of, ...	31, Princess Gardens, South Kensington, London, S.W.
1861	Mount Edgcumbe, The Right Hon. the Earl of, Mount Edgcumbe, Devonport.	
1878	Neild, Frederic, M.D.	6, Sussex Terrace.
1884	Norman, John G.	Sea View Terrace.
1881	Odgers, William Ernest	9, Paradise Place, Stoke.
1874	Oxland, Charles	Portland Square.
1851	Oxland, R., PH.D., F.C.S.	Portland Square.

LECTURING MEMBERS—*continued.*

Elected.	Name.	Address.
1871	Pearse, W. H., M.D. . . .	1, Alfred Place.
1880	Power, W.	H.M. Customs, Parade.
1883	Prance, H. Penrose	7, Athenæum Terrace.
1859	Prowse, A. P.	Yanadon, Horrabridge.
1884	Radford, Charles H.	37, Bedford Street.
1880	Reed, William Cash, M.D. . .	9, Princess Square.
1880	Rew, G. Gale	40, Torrington Place.
1884	Rice, J.	7, Rochester Terrace.
1875	Rider, A., F.C.S.	4, Haddington Road, Stoke.
1857	Risk, Rev. J. Erskine, M.A. . .	Princess Square.
1861	Rowe, J. Brooking, F.S.A., F.L.S.	Mulgrave Street.
1860	Shelly, John	Princess Square.
1875	Smith, Robert	George Street.
1867	Slater, D., M.A.	Cheveley Hall, Seymour Road.
1869	Square, W., F.R.C.S., F.R.G.S. .	Portland Square.
1883	Square, William Joseph, F.R.C.S.	Portland Square.
1884	Square, J. Elliot	22, Portland Square.
1876	Tippetts, G. E.	The Mount, Mannamead Avenue.
1865	Tweedy, W. Gage, B.A.	Athenæum Terrace.
1881	Ugnow, Richard C.	14, Headlands Park.
1884	Vincent, Rev. Samuel	6, Woodland Terrace.
1883	Watson, G. F.	3, Walker Terrace.
1875	Webb, F. J., F.G.S.	13, Portland Villas.
1875	Weekes, Samuel	Sussex Terrace.
1873	Woollecombe, R. W.	St. Jean D'Acre Terrace, Stoke.
1879	Worth, R. N., F.G.S.	4, Seaton Road.
1878	Wright, W. H. K., F.R.H.S. . .	31, Headlands Park.

"The property of the Institution, the election of members, management of the concerns, and enactment of laws, are vested exclusively in the Lecturing Members."—LAW 5.

ASSOCIATES.

Allport, S., 8, Houndiscombe Place, North Road.	Brendon, W. Turner, George Street.
Adams, Benjamin, Walmer Villa.	Broome, G. A., 2, Connaught Villas, Mutley.
Appleton, Edward, A.M.I.C.E., 1, Vaughan Parade, Torquay.	Brown, George H., Mill Lane.
Baron, E. G., 2, Woodland Terrace.	Brown, J. P., The Abbey, Plymouth.
Barrett, G. R., Bank of England Place.	Bulteel, Thomas, Radford, near Plymouth.
Barrett, J., 8, Staddon Terrace.	Chalker, John P., 9, Crescent Place.
Bayly, John, Seven Trees.	Chambers, Henry, 23, Clarendon Place.
Bayly, Robert, Torr Grove, near Plymouth.	Champernowne, A., F.G.S., Dartington House, Totnes.
Bazeley, William, Princess Square.	Clark, W., Thorn Park Villas.
Beechey, Adml., 13, St. James's Ter.	Cole, A., Bedford Terrace.
Bellamy, G. D., Endsleigh Place.	Compton, C. E., 2, Mutley Park Ter.
Bennett, John, M.A., Princess Square.	Daubeny, Capt. G. A., Naval Bank.
Berry, J. P., 2, Walker Terrace.	Dawe, R. H., Buckland Terrace.
Bond, A. James, Whimble Street.	Deacon, Josiah, 45, Durnford Street, Stonehouse.
Bragington, George, 6, Ford Park.	

ASSOCIATES—*continued.*

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 Foster, J. B., 4, Cambridge Street.
 Fox, E., Hillside.
 Francis, H., 22, Ker St., Devonport.
 Gale, Dr. J., M.A., F.G.S., F.C.S.,
 Lockyer Street.
 Gibbons, W., 21, Headlands Park.
 Goulding, F. H., George Street.
 Goad, J., 1, Buckingham Place,
 Stonehouse.
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 Greenlaw, William, Lipson Cottage.
 Griffiths, G., 7, Lockyer Street.
 Gurney, Rev. E. G., 19, Gascoyne Place.
 Haite, John, C.E., Dockyard, Devon-
 port, & 72, Durnford St., Stonehouse.
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 Harper, Cecil H., Melbourne, Australia.
 Harris, Henry Vigurs, Union Street.
 Hearder, H. P., Westwell Street.
 Heath, William, George Street.
 Hele, John, Mus. Bac., 1, Wyndham
 Place.
 Hender, J., S. D. & C. Railway
 Office, Millbay Road.
 Hendry, A. S., 6, Lockyer Street.
 Hill, F. N., 9, South Devon Place.
 Hoppen, Vosper, George Street.
 Hubbard, G., Ford Park.
 Hurrell, Henry, Great Western Docks.
 Jago, Edward, 6, Athenæum Terrace.
 Jago, Richard, Hallwell House, Hall-
 well Street.
 James, Capt., R. W. Yacht Club.
 James, C. H., Ingleside, Mannamead.
 James, Edward, Greenbank.
 James E. H., Woodside.
 James, W. C., J.P., 6, Glenside, Col-
 lege Road.
 Jenkins, James, M.D., Nevingstone,
 Mannamead.
 Keen, Henry, St. James's Terrace.
 Kerswell, Alfred J., Ham Street.
 Kerswell, Samuel, 1, Osborne Place.
 Kerswill, F. J., Frankfort Street.
 King, William, Hoe House.
 Latimer, Alfred, Portland Square.
 Lemann, Fred. C., Blackfriars House.
 Luscombe, H. A., 35, Clifton Place.
 Lethbridge, W., 1, Leigham Terrace.
 Mabin, Francis, 10, Union Street.
 Macarthy, Robert, H.M. Customs,
 Parade.
 Martin, W. L., Windsor Villas.
 McAndrew, J., Lukesland, Ivybridge.
 Mitchell, T., Eton Villas.
 Morrish, F. A., 2, Bedford Terrace.
 Morris, Charles, 5, Seymour Terrace.
 Mugford, James A., Elm Villa,
 Mannamead.
 Page, James A., 10, Windsor Terrace.
 Pagen, F. Fletcher, F.G.S., Pendower,
 Mannamead.
 Payne, James, 21, Clarendon Place.
 Pearse, Miss Alice, Bedford Terrace.
 Pearse, S., Royal Hotel.
 Pearse, T., M.D., Flora Place.
 Penrose, Richard A., 74, Durnford
 Street, Stonehouse.
 Penson, James, 7, Boon's Place.
 Philips, G., 1, Victoria Place, Stone-
 house.
 Picken, Samuel, 12, Hill Park
 Crescent.
 Pode, J. Duke, J.P., Slade, Ivybridge.
 Preston, H., Old Town Street.
 Pridham, Edmund, 10, Princess Sq.
 Radford, D., Lydford, Bridestowe.
 Randle, J., Union Street.
 Ridge, B. J., 3, Gainsborough Place.
 Rooke, Samuel, 5, Westbury Terrace.
 Rorie, John, M.D., Ford Park.
 Roy, David, 6, Holyrood Place.
 Russell, G., Hoe Park House.
 Serpell, E. W., 19, Hill Park Crescent.
 Stephenson, G., Old Town Street.
 Stephenson, R., National and Pro-
 vincial Bank of Eng., Devonport.
 Stribley, Edwin, Belgrave Terrace.
 Swain, W. Paul, The Crescent.
 Taylor, Frank, 37, Flora Street.
 Taylor, J., 37, Flora Street.
 Taylor, Sidney, 37, Flora Street.
 Thomson, Lewis C., Hillsborough,
 College Road.
 Walkem, W. L., Emma Place, Stone-
 house.
 Watt, Charles, Elm Park Villa,
 Mannamead.
 Watt, Edward, 1, Meadfoot Terrace.
 Widger, James, 14, Tavistock Street.
 Williams, H. J., Polperro, Cornwall.
 Willoughby, J., Stafford Terrace.
 Willoughby, W., The Foundry.
 Wills, J. C., 68, Durnford Street,
 Stonehouse.
 Wilson, J. Walter, Hoe Park Terrace.
 Windeatt, John, Woodland House.
 Woodhouse, Henri B. S., 15, Portland
 Square.

LADY ASSOCIATES.

Adams, Miss Sophie, Walmer Villa, Mannamead.	Gidley, Miss, 2, St. Michael's Terrace.
Borland, Mrs. R., Emma Place, Stonehouse.	Horncastle, Miss Emily, 7, York Street.
Bragg, Miss, Weston Lodge, Seymour Road, Mannamead.	Hurrell, Miss, Pennycross, Plymouth.
Bragg, Miss S., Weston Lodge, Sey- mour Road, Mannamead.	Minhinnick, Miss E. M., Portland Square.
Butt, Mrs. F., Fernleigh Villas, Mannamead.	Northcott, Miss E. J., 6, Adelaide Road.
Cann, Miss Agnes, 20, Tavistock Road.	Parson, Miss, 7, Bedford Terrace.
Cooper, Miss Agnes G., 12, Chelten- ham Place.	Popham, Miss, Rowden, Compton.
Davey, Miss C., Wedgwood Villas, Ford Park.	Popham, Miss Isabella, Rowden, Compton.
Davey, Miss K., Wedgwood Villas, Ford Park.	Rumble, Miss, 1, Laira Terrace.
	Spooner, Miss Annie, 23, Portland Square.
	Twose, Mrs., 4, Clarendon Place.
	Waghorn, Miss, Hill Park Place.

JUNIOR ASSOCIATE.

Worth, R. G. H., 4, Seaton Road.

BALANCE SHEET

OF

The Plymouth Institution and Debon and Cornwall Natural History Society.

FOR THE YEAR ENDING 2ND APRIL, 1885.

	£	s.	d.		£	s.	d.
By Annual Subscriptions at £1 1s.	218	8	0	To Balance			
" " at 10s. 6d.	12	12	0	" Library—Books, &c.	40	5	11
				" " Binding	7	12	0
Arrears of Subscriptions	231	0	0				
" Rent of Hall	3	3	0	" Reports	47	17	11
" Plymouth Art Club Gas and Fires	5	8	0	" Printing and Stationery	29	3	6
" Ladies	1	16	0	" Museum	11	15	0
" Subscriptions to Museum	1	2	6	" Art Gallery	8	8	4
" Excursion Balance	8	3	0	" Repairs	1	10	4
" Admissions to Museum	1	1	9	" Insurance and Water	37	0	7
" Balance	1	3	0	" Lighting and Warming—Gas	8	15	6
	520	18	3	" " Fuel	10	1	10
					2	13	0
				" Salary and Commission	12	14	10
				" Conversazioni	25	16	9
				" Petty Disbursements	14	17	11
				" Expenses of Incorporation	17	11	0
				" Interest	33	0	10
					26	1	11
					<u>£773</u>	<u>15</u>	<u>6</u>
				Balance	520	18	3

April 2nd, 1885.

SAMUEL CATER, }
E. G. BENNETT, }
Treasurers.

D. D. DOBELL, }
JOHN G. NORMAN, }
Auditors.

SECRETARIES' REPORT.

1884-85.

THE Secretaries present the following Report of the Proceedings of the Society during the Session 1884-85.

The meetings have been well attended, and on one or two occasions have attracted exceptionally large audiences; the average attendance having been eighty-two.

The Lectures, of which twenty-three were delivered, were as follows:

1884.

SERIES I.

- | | | |
|---------|---|-----------------------------|
| Oct. 2. | Conversazione. | |
| „ 9. | President's Address | MR. D. SLATER, M.A. |
| „ 16. | The Older Charities of Plymouth | MR. R. N. WORTH, F.G.S. |
| „ 23. | Modern Witchcraft | MR. JOHN RICE. |
| „ 30. | The latest Story of the Cuneiform Inscriptions | REV. G. EVANS, M.A. |
| Nov. 6. | How some Physical Measurements are made | DR. J. MERRIFIELD, F.R.A.S. |
| „ 13. | Odds and ends of Monetary History | MR. JOHN G. NORMAN. |
| „ 20. | Seals (pinnipeds) and their geographical distribution | MR. F. H. BALKWILL. |
| „ 27. | Local Heraldry (The Shields in the Museum) | MR. A. J. JEWERS, F.S.A. |
| Dec. 4. | Our Local Flora, its economic aspect | MR. D. D. DOBELL. |
| „ 11. | The Religions of the Incas and of the Aztecs | REV. W. E. DARBY. |
| „ 18. | Harbour Accommodation in the West | MR. J. C. INGLIS, C.E. |

1885.

SERIES II.

- | | | |
|---------|----------------|-----------------------|
| Jan. 8. | Conversazione. | |
| „ 15. | Soda | DR. R. OXLAND, F.C.S. |

Jan. 22.	Raised Beaches and Submerged Forests	MR. R. N. WORTH, F.G.S.
„ 29.	The Trinity Corporations	MR. F. J. WEBB, F.G.S.
Feb. 5.	Pauperism and its Prevention	REV. CANON BLACKLEY.
„ 12.	The Function of Government, and Limit of State Interference	REV. W. DICKSON, LL.D.
„ 19.	The Development of Ideas respecting Property in Land	MR. C. F. BURNARD.
„ 26.	Iceland: Its Language, Literature, and Legends	MR. D. SLATER, M.A.
Mar. 5.	The Education of the Eye	MR. H. R. BABB.
„ 12.	Brian Boru	REV. S. VINCENT.
„ 19.	Comments on the Fine Arts	MR. GODFREY EVANS.
„ 26.	The Extinct Lake of Bovey Tracey	MR. W. PENGELLY, F.R.S., F.G.S.

Six lecturing members, fifteen associates, and one junior associate have joined the Society during the Session; the numbers on the books being—Eighty-nine lecturing members, one hundred and twenty-two associates, twenty-one lady associates, and one junior associate. This membership is practically the same as last year, and makes a total of two hundred and fifty-two, inclusive of nineteen honorary, corresponding, and life members.

The new Museum is now in working order; the building and its decorations having been thoroughly completed, whilst the various collections have been arranged and exhibited by the several Curators. The Society is to be congratulated on the satisfactory appearance and extent of the Museum and its contents. During the past year it has been opened free to the public every Saturday afternoon, a privilege which seems to have been appreciated, as many as one hundred and fifty visiting it on one day; and it is satisfactory to report that no difficulties have arisen from this important step, so far as the conduct of the visitors is concerned. In connection with this it is also to be noted that the majority of persons thus visiting the Museum could not otherwise have done so.

During the winter months four lectures have been given to working men on subjects illustrated by the collections in the Museum. It was originally intended that these lectures should be delivered in the Museum, as on a previous occasion, but, owing to the great demand for admittance, it was found desirable to give them in the Hall. These lectures, which were largely attended,

and were obviously much appreciated by the audiences, were as follows:—"Mineralogy," by Dr. R. Oxland; "Craniology," by Mr. F. H. Balkwill; "Rocks of the Locality," by Mr. R. N. Worth, F.G.S.; and "Prehistoric Man and his Implements," by Mr. F. Brent, F.S.A.

In July last the Geologists' Association selected South Devon as the scene of their "Long Excursion," and made Plymouth their head-quarters. They were heartily welcomed to the West at a *Conversazione* given by the Council and Members of this Society, and three gentlemen connected with it acted as their directors—Mr. A. Champernowne, F.G.S., Mr. W. Pengelly, F.R.S., F.G.S., and Mr. R. N. Worth, F.G.S. During the visit the Museum was carefully inspected with much interest, and found of great service in illustrating the Geology, Mineralogy, and Petrology of the district.

The Anniversary Meeting was held on the 1st May, when the following short papers were read: "A new Method of Chaining a Lunar Distance," by Dr. Merrifield, "Truth and Realism," by Mr. Godfrey Evans.

The annual excursion of the Members, Associates, and their friends took place on the 2nd of July, when a large party proceeded by wagonettes from Plymouth to Two Bridges. Here various parties were formed to explore the objects of interest in the neighbourhood, returning to high tea at the Duchy Hotel, Princetown.

There were during the Session two *conversazioni*, both numerously attended. The first was held on the 2nd October, 1884, and the second on the 8th January, 1885. At the first the pictures of the Art Club, still remaining on the walls of the Art Gallery, formed a principal feature of the evening, while a selection of vocal and instrumental music was kindly rendered, under the direction of Mr. A. C. Faull, by Miss Rider, and Messrs. Pardew and Tuckett. The second was in part scientific. Microscopes and instantaneous photographic apparatus were exhibited by Mr. W. G. Tweedy, and the joint Curator of Entomology, Mr. Bignell, exhibited an apparatus of his own contrivance by which he took excellent enlarged photographs of insects. A number of specimen photographs were exhibited, and showed great cleanness and detail. Mr. Doel, jun., of Stonehouse, kindly exhibited a typical series from his well known collection of pottery, china, and

enamels, which attracted much attention. At the same conversazione Dr. Oxland exhibited and described a collection of rare minerals, and Messrs. Goad exhibited a fine series of Plymouth marbles and Aller pottery, while music was provided at intervals by the Misses Square and Dawson, and Mr. W. Square.

The Council of the Institution, after correspondence with the trustees of the National Gallery, succeeded in obtaining the loan of two pictures, the "Harvest Home," and "Mercury sent to admonish Æneas," by J. W. M. Turner, R.A., which have been deposited in the Art Gallery.

Advantage was taken of the visit of your esteemed honorary member, Mr. W. Pengelly, F.R.S., F.G.S., in March last, to invite him to a dinner, on the evening of his lecture, in recognition of his great services to Geological Science, and to the advancement of Science in the West of England. The dinner was largely attended, and the proceedings very pleasant.

The incorporation of the Society referred to in the last report has been completed, and took effect from the last annual meeting. For valuable assistance in connection with the necessary formalities the Society is much indebted to the Treasurer, Mr. S. Cater.

It being necessary to have a common seal, a design was prepared by Mr. Arthur J. Jewers, one of your Secretaries, which was accepted by the Council, and which has been engraved for use as a seal, and also as a device for the circulars, &c., of the Institution. Mr. Jewers has furnished the following description :

"The object kept in view in making the design was to represent as fully, and at the same time as concisely as possible, the objects, history, and location of the Society, and that it should be appropriate to this Institution alone.

"In the outer circle we have the name of the Institution with the dates of its foundation and incorporation, in the inner circle the second title of the Society appears. Within these circles are five shields, the centre bears the arms of the founder of the Institution, Mr. Henry Woollcombe, F.S.A. Above is a shield with the coat of the Priory of Plympton—really the arms of the See of Winchester or Exeter. Warelwast, Bishop of Winchester, and sometime Bishop of Exeter, having refounded the Priory, dedicating it to the Blessed Virgin Mary, SS. Peter and Paul, the sword and keys were very naturally adopted as the armorial

ensigns in connection with the apostles, in what was pre-eminently an age of symbolisms. The distinction between the arms of the Sees of Winchester and Exeter has been exhaustively and successfully treated by Mrs. Halliday in her privately-printed work on *The Courtenay Mantelpiece*. The Priory of Plympton possessed a large portion of Plymouth at an early period, and until its dissolution by Henry VIII. retained certain rights and jurisdictions therein. Below the coat of Woollcombe we have the older arms of Plymouth, which are so given in the *Heralds' Visitation* of 1574; to the left we have the arms of De Redvers, the early Earls of Devon, and to the right the arms generally assumed to be those of the county of Cornwall. We are thus shown by whom the Institution was founded, and the town in which it has its home; while the two counties are indicated by the shields on either side of Woollcombe. In the spaces between the shields we find a Cornish chough to represent Natural History; a palette and brushes stand for Art; a scroll, ink-horn, and pen attest that Literature and Science are not forgotten; while a cromlech shows that the antiquities of the West of England receive attention from the Members."

The Curator of the Library reports :

"During the past year an attempt has been made to recover lost ground in the matter of binding. Many volumes of periodical literature have been bound, but a great many remain in paper covers, which, as they cannot be put on the shelves, are of course of little service to our Members.

"A very important gift has been made to the Institution during the past few weeks. Thanks to the efforts of the Earl of Mount Edgcumbe, the committee appointed by the Lords Commissioners of Her Majesty's Treasury invited an application from the Society for a grant of the publications issued under the direction of the Master of the Rolls. Mr. Worth was good enough to indicate what volumes would be especially desirable, and the result has been that no less than seventy-four volumes of Calendars, 150 volumes of Chronicles, and thirty folio and other volumes of the Record Commissioners' publications have been presented. There is but one condition attached to the donation—if by any chance it should happen that the Institution should cease to exist, or if the books are at any time no longer required for permanent preservation

in the Library, they are to be returned to Her Majesty's Stationery Office.

"To accommodate this large addition to the Library, the Council directed that a book-case should be placed in the ante-room on the right-hand side of the entrance lobby.

"Besides the large donation from the Treasury, the following books have been presented to the Library during the past year: 'Atti della Societa Toscana di Scienze Naturali Processi Verballi,' vols. iv. v. and vi. 'Report and Proceedings Manchester Scientific Students' Association,' 1883. 'Catalogue of the Library Zoological Society of London. Supplement to August 30th, 1883.' 'A Treatise on Navigation,' by Dr. J. Merrifield. A series of tracts, by R. N. Worth. Seven Greek books from Miss Rumble. 'Report British Association,' 1883. 'Transactions and Proceedings Botanical Society of Edinburgh,' vol. xv. part 1. 'A Centenary of Science in Manchester,' by R. A. Smith. 'Memoirs Manchester Literary and Philosophical Society,' vol. vii. third series. 'Proceedings Manchester Literary Society,' vols. xx. xxi. xxii., for 1881-82-83. 'Proceedings Royal Society,' vol. xxxvi. 'Journal and Proceedings Royal Society of New South Wales,' 1882, vol. xvi. 'Proceedings Somersetshire Archæological and Natural History Society,' 1883. Two pamphlets on the 'Si-yu-ki,' from Prof. Beal. 'Proceedings of the Geologists' Association,' vol. ii. parts 2 and 6; and vol. viii. Nos. 5, 6, 7, and 8; vol. ix. No. 1. 'Fifty-first Annual Report Royal Cornwall Polytechnic Society,' 1883. 'List of the Fellows Zoological Society of London to June, 1884.' 'Proceedings of the Bristol Naturalists' Society,' 1883-84. 'Journal Royal Institution of Cornwall,' 1884. 'Smithsonian Report,' 1882. 'United States Geological Survey Report,' 1881-82. 'Scientific Proceedings of the Royal Dublin Society,' 8 parts, 1882-84. 'Scientific Transactions Royal Dublin Society,' vol. i. new series. 'Fossil Fishes,' by James W. Davis, F.G.S. 'The Topography of Devon,' by J. Brooking Rowe. 'Report and Transactions of the Devonshire Association,' July, 1884, and Index. 'The Devonshire Domesday,' part 1. 'Newlyn and its Pier,' by Rev. W. S. Lach-Szyrma. 'Proceedings Berwickshire Naturalists' Club,' vol. x. No. 2. 'Transactions Essex Field Club,' vol. iii. part 8, and first Appendix to same. 'United States Geological Survey. Mineral Resources of the United States.' 'List of the Geological Society of London,'

1884. 'Second Supplement to Saturated Steam,' by R. A. Peacock. 'Journal and Proceedings Royal Society of New South Wales,' 1883. 'Transactions Natural History Society of Northumberland, Durham, and Newcastle-on-Tyne,' 1883. 'Transactions Norfolk and Norwich Naturalists' Society,' 1882-3 and 1883-4. 'Report and Transactions Penzance Natural History and Antiquarian Society,' 1882-83-84. 'Catalogue of Diurnal Birds of Prey in the Norwich Museum,' by J. H. Gurney. Various numbers of the Journal of the Royal Geographical Society, by W. Square, December, 1884. Pamphlets relating to the Devon and Cornwall Natural History Society, by T. Harper. 'Comparative Vocabularies of the Tudian Tribes of British Columbia.' 'Descriptive sketch of Physical Geography and Geology of Canada,' 1884. 'Annual Report and Proceedings Belfast Naturalists' Field Club,' 1883-4. A tract on 'Ants,' by G. C. Bignell. 'Report of Excursion of the Geologists' Association to South Devon,' by R. N. Worth. 'Annals of Lloyd's Register,' 4to. 'Transactions Huddersfield Naturalists' Society,' 1883."

The Curator of Anthropology reports that the collections under his charge are in good order. "The cuneiform inscriptions on the two valuable Babylonian Bricks in the Museum, that have been so long unnoticed, have been translated by the Rev. George Evans, M.A., and the result communicated to the Members in a thoughtful paper read by him during the past session.

"The following donations have been made to your Curator's department during the session, viz. :

"Four Caffre Spears, Native Mask, Chinese Flute, Tartar Officer's Commission, Tartar Writing-case and Bowstring, by Major Elliot, Royal Marines.

"Hand Brick, Pounder and Shells from Kitchen Midden in the Island of Herm, by Major-General Freath, Royal Engineers.

"Afghan Sword and old Staff of Office, 1635, by Mr. James Skardon.

"Mace and Club, by Captain Morshead, R.N.

"A collection of Coins, Tradesmen's Tokens, Medals, and Nuremberg Jettons, in silver, copper, and lead, in all 151 pieces, many valuable, by Mr. F. H. Goulding, Mannamead.

"A collection of Casts of French Medals, in frame, by Mr. Clifton."

The Curator of Mineralogy reports :

“Considerable progress has been effected in the arrangement of the minerals, and a small amount, the first for many years, has been expended on a few choice specimens.

“The collection of minerals, although small, is very useful for the study of the science and the illustration of the productions of Devon and Cornwall. Contributions of other minerals than those in possession, or of duplicates of those already there, but in better condition, or of better quality, are very desirable.”

The Curator of Petrology reports : “The two additional cases recommended in his last report have been fixed, and a large number of local specimens have been added to the collection, which was found of much interest and value during the visit of the Geologists’ Association. Among the chief donations is a valuable series of Channel Rocks given by Mr. A. Roope Hunt, F.G.S., of Torquay.”

The financial position of the Society does not call for comment ; the report of the Treasurers furnishes all necessary information.

JAMES C. INGLIS, }
ARTHUR J. JEWERS, } *Hon. Secs.*

Dated March, 1885.

METEOROLOGICAL REPORT.

SUNSHINE IN PLYMOUTH FOR 1884.

MONTH.	Sun above the horizon hrs. min.		Sun shone in Plymouth hrs. min.		Percentage actual was of possible.	No. of days no sun-shine.
January	259	22	17	15	6·7	21
February	286	53	39	5	13·6	18
March	364	41	118	25	32·6	6
April	409	55	155	5	37·8	4
May	474	7	201	20	42·5	6
June	484	5	212	0	43·8	1
July	486	33	159	1	32·7	3
August	441	26	232	5	52·6	3
September	372	24	153	0	44·1	6
October	325	52	85	15	26·2	8
November	263	50	41	43	15·8	12
December	244	11	25	25	10·4	22

The sunshine for the year was 32·5 per cent. of that possible, the sun shining in Plymouth nearly one-third of the time he was above the horizon ; whilst on 110 days he did not appear. The temperature of the year has been about the average, although the days have been rather colder than the mean. The freezing point in the screen was reached on three nights only, one of which was on April 19th. Rain fell on 192 days to the amount of 28·73 inches, which is only 79 per cent. of the average. The greatest rainfall in one day was on March 3rd, when 1·15 inches were measured, and this was the only day in the year on which more than one inch fell. The greatest atmospheric pressure for the year was 30·657 inches on October 5th ; the least was 28·654 inches on January 26th ; and it fell below 29 inches once only for the year. The highest temperature for the year was 79·5 deg. F. on August 10th ; the lowest was 29 deg. F. on February 3rd.

COLD MONTHS.—April, May, June, July, October, November.

WARM MONTHS.—January, February, March, August, September, December.

WET MONTHS.—January, March, July.

DRY MONTHS.—January, April, May, June, August, September, October, November, December.

The year on the whole has been a very dry one, only 79 per cent. of the average amount of rain having fallen, while the number of rainy days was 3 per cent. above the mean. The number of days on which either easterly or westerly winds have blown was below the average, but there was a greater number of calm mornings. The longest dry period was from June 8th to July 2nd ; the longest wet period was from February 8th to March 13th. Gales producing great damage occurred in January, February, and December, and thunderstorms were observed in January, July, August, September, and December.

An ABSTRACT from the METEOROLOGICAL REGISTER, from 1st January, 1884, to 31st December, 1884, kept at the Navigation School, Gascoigne Place, Plymouth (Lat. $50^{\circ} 22\frac{1}{2}'$ N., Long. $4^{\circ} 7\frac{1}{4}'$ W.), by JOHN MERRIFIELD, LL.D., F.R.A.S., F.R.M.S.

MONTH.	BAROMETRICAL PRESSURE REDUCED TO MEAN SEA LEVEL AT 32° FAH.			TEMPERATURE.			HYGROMETER.				RAINFALL.		DIRECTION OF WIND AT 8 A.M.				
	Average Barometer for Month.	Maximum for Month.	Minimum for Month.	Average in shade.	Minimum.	Average temperature.	Average dry Bulb.	Average wet Bulb.	Average dew Point.	Average humidity, saturation, 100.	No. of days on which no rain fell.	Quantity in the month in inches.	From N. by E. to N.	From E. to S. by S.	From S. to W. by W.	From W. to N. by N.	Calm.
1884																	
January .	30-148	30-637	29-210	50-44	41-90	46-17	45-40	44-49	43-40	93	19	3-86	4	1	15	5	6
February .	29-853	30-532	29-465	49-24	40-23	44-74	43-45	42-27	40-85	91	21	4-04	2	11	9	3	4
March .	29-905	30-265	29-244	51-80	40-09	45-94	43-71	42-12	40-21	87	16	3-41	7	9	3	6	6
April .	29-800	30-103	29-201	53-11	39-57	46-34	45-58	42-96	39-95	81	12	1-72	14	4	0	3	9
May .	30-015	30-409	29-537	59-18	46-64	52-91	53-54	50-32	47-10	79	10	1-00	10	4	11	6	0
June .	30-074	30-312	29-579	67-13	51-26	59-19	0-4	56-52	53-45	78	8	0-73	1	3	2	16	8
July .	29-957	30-214	29-590	68-05	55-18	61-62	61-51	59-16	57-15	86	22	3-39	4	5	13	6	3
August .	30-016	30-239	29-744	72-02	56-22	64-12	63-53	60-41	57-83	81	10	1-24	10	0	9	6	6
September .	30-013	30-346	29-626	65-75	53-24	59-50	57-86	56-17	54-65	89	19	2-52	8	1	9	6	6
October .	30-122	30-657	29-392	55-42	44-18	49-80	49-13	48-19	47-16	93	17	1-61	3	2	4	13	9
November .	30-174	30-539	29-729	50-96	40-42	45-69	43-96	42-77	41-34	90	17	1-67	8	5	5	7	5
December .	29-913	30-261	29-191	48-07	39-02	43-54	42-70	41-45	40-95	90	20	3-54	8	2	11	7	3
Average for 1884	29-999	30-377	29-459	57-60	45-66	51-63	50-87	48-90	46-83	87	192	28-73	79	47	91	84	65
Average for 20 Years	29-951	30-401	29-359	57-94	45-02	51-48	50-63	48-73	46-84	87	186-1	36-39	71-6	63-1	105-1	84-4	35-2

The observations are all made at eight a.m. The Rain Gauge is by Casella, and is 8 inches in diameter; its top 9 feet 2 inches above the ground, and 75 feet above the mean level of the sea. A rainy day is one in which not less than 1-100th of an inch falls. The instruments have all been supplied by the Meteorological Committee of the Royal Society, compared at Kew, and the index error supplied to each.

ADDRESS

AT THE OPENING OF THE SESSION 1884-5.

BY DANIEL SLATER, M.A.

President.

LADIES AND GENTLEMEN,—

A broad review of the age in which we live, and the circumstances amidst which we have our being, has filled different observers with the most opposite feelings, according as they have taken an optimist or a pessimist view of them. Of course we are too near our own age to form a just estimate of it; it must retire to a distance before we can properly take in its exact perspective. But speaking for myself, I must confess that it fills me with feelings of gratitude and hope. Casting the eye back on preceding centuries, and round on the various nations whose life has been handed down to us by History, we cannot, it seems to me, avoid the conclusion that the present age is conspicuous for two things: First, the Love of Truth as a motive power in Thought; and, second, the Love of Humanity as a motive power in Action. Other forms of expression have been often used; but what I have mentioned as the Characteristics of the Age seem to underlie them all. Thus it has been said that this is an Age of Doubt, that it is a Scientific Age, and so on. But it is a Scientific Age because the determination to find out the Truth, the whole Truth, and to accept nothing but the Truth, is first applying itself to phenomena, as coming naturally before the noumena, and being more easy of solution; and it is an Age of Doubt, not from choice or the love of Doubt for its own sake, but because Doubt is a necessary condition of mind in the investigation of Truth. The true and the false are being questioned only that those things that cannot be shaken may remain.

Leaving then the Love of Humanity, and taking up, as I think I have a special right to do in this place, the Love of Truth as

one of the characteristic features and special glories of our time, allow me to call your attention for a short time to some of its achievements of late years, and specially in the realm of Literature.

We whose lot is cast in the close of the nineteenth century enjoy advantages unknown to any previous age. Geology has lifted the veil which once concealed the early history of our Globe. Astronomy, taking a wider range, presumes to investigate the origin of the Solar System itself. But these and other Sciences deal with inert and senseless matter. It is the glory of Literature that it reveals to us Man—his feelings, thoughts, and aspirations.

“O'er the brown moor some love to roam,
And with the hammer's dint
To strike from its old chalky home
The curious-rounded flint.
Or they with brightening eye will bring,
From bed of dingy clay,
Some bony frame of a scaly thing,
Unused to garish day.

“But in a far-diverging way
My best-loved fancies go.
Man is my theme ——.”

Casting our eyes back, which, thanks to History, we can do along an avenue of four thousand years, how many illustrious names do we see shining in the darkness, and as it were looking down to encourage or instruct us! Just before the battle in which he defeated the power of the Mamelukes, Napoleon is said to have galloped in front of his soldiers and, pointing to the Pyramids whose hoary tops overlooked the plain, to have exclaimed, “Soldiers, remember that forty centuries are looking down upon you!” The appeal was not made in vain. In a few hours the soldiers of Italy had defeated Monrad Bey, and rendered the Battle of the Pyramids one of the eight most illustrious names that now irradiate the Conqueror's tomb. The student, whose well-stored library is furnished with the writings of the good and great of every age and tongue, can partake at will of these inspiring influences, and quench the thirst of his spirit at fountains flowing with perennial freshness. Surrounded by such a magnificent display of intellectual power, his heart glows with the same enthusiastic pride which fills the successful general, who looks round on his battalions, hardened by peril and fatigue, and feels that with such troops he can “go anywhere, and do anything.”

But if we may be allowed to adapt to our purpose a line from Shakspeare—
 “Here feel we but the penalty of *Babel*.”

For the thoughts of an author are one thing, his language another. The former may be reached by a translation, the latter only by a longer or shorter period of hard labour; and so mysteriously are the two interblended, that it may perhaps be safely affirmed that every author suffers something in translation. There is, however, a pleasure in struggling hard to discover the meaning of a sentence in an unknown tongue, that can be compared to nothing but the pleasures of the chase. With mingled feelings of courage and despair, we enter the maze bristling with all the difficulties of etymology, grammar, and idiom, expressed in words of strange look and uncouth sound; but on we go, armed with grammar and dictionary, till at length the obscure becomes clear, and we carry off in triumph the precious meaning of the author as fresh and warm as when it first issued from his brain. In the life of Elihu Burritt, the great American linguist and philanthropist, we are told how amidst many difficulties he commenced the study of Greek. After repeated failures, he at length succeeded one morning before the other lodgers were up in mastering in the original the opening lines of Homer's *Iliad*, and with pardonable pride he took a walk in honour of the victory. Many of us no doubt have shared his triumph, as we have made out for ourselves in the Hebrew original the story of the Creation of the World, sublime for its antiquity, if for no higher reason; or, taking up the Mahábhárata, have puzzled out the tale of Nala, “Vírasena's mighty son.” In kind, if not in degree, these high pleasures are shared—

“O fortunatos nimium sua si bona norint!”—

by every schoolboy or girl who patiently works out the meaning of a passage in Cæsar or Xenophon.

But much of the literature that time has preserved has till lately defied all the sagacity of scholars, and the question has been, “Who is able to open the book and to loose the seals thereof?” It would be very pleasant if I had the requisite power, and you the patience, to show what has been accomplished in this department during, say, the last ten years. The subject is a tempting one, but I must confine myself to a few generalities. Turning first to the East, where the more powerful beams of the sun seem

to have ripened the human mind into an earlier maturity, fountains of wisdom, Chinese, Sanskrit, and Persian, are being unsealed for us as far as translations can do this. And here the place of honour undoubtedly belongs to Professor Max Müller, whose researches have raised Philology to the dignity of a Science, and whose discoveries will place him, I believe, with Darwin and, as some think, Spencer, in a triumvirate of the greatest Philosophers of the age. To him and an army of Oriental Scholars, of whom he is the acknowledged chief, we owe a series of Translations of the Sacred Books of the East, which has already reached many volumes; so that now the Upanishads may be read by those who are innocent of Sanskrit, and the mysteries of the Zend-Avesta are no longer darkened by the still deeper mysteries of D'Anquetil.

Special interest attaches now to Assyria, whose strange libraries, buried nearly three thousand years, are being brought to light; thus forming a real addition to our previous sources of information. In the interpretation of these it is satisfactory to find that this Society is taking part, and the explanation of the Tablets in our Museum by one of our own Members was one of the most memorable features in our last year's proceedings. I am happy to find that we are to be favoured this session with another lecture on the same subject. Judging from the number of Greek and Latin books that issue yearly from the press, it would not appear that what are commonly called the Classics are losing their hold upon the public mind, whether regarded as a branch of polite literature or of School education. There is a charm about the ancient Greeks which we can feel if we cannot explain. Their sculpture adorns our Institution. In the Art Gallery the perfection of the female form is exhibited in the Venus de' Medici, while before us stands in his godlike strength and beauty the Apollo Belvedere—

“The god who darts around the world his rays.”

But Greece is best known by her language, whose unapproachable majesty and beauty have cast such a spell upon the minds of men from the time of Cato the Elder, who tried in vain to counteract the spell, to that of Gladstone, who yields so willingly to its power. In the present day, when such important additions have been made to our knowledge of the facts and laws of the material universe, and when so many other languages more akin to our own are asserting their claims, it has appeared to many strange that the study of the Greek and Latin Classics should still

occupy such a strong place in the curriculum of our higher Schools. This is felt by many who would not be prepared to go so far as Herbert Spencer, who would make Science the "be all" and the "end all" of Education. That the study of Classics is rather extending than declining is, I think, very evident; while that of Science, which had begun to supplant them, has positively retrograded. Thus, to take only one example, we read in the *Journal of Education* for September, 1884, that in the primary schools of this country grammar still holds "its bad (!) pre-eminence, and science [has] actually retrograded; this specific subject being only taken by fifteen departments in the whole kingdom." Again we read, "The inspectors themselves, with the noteworthy exception of Mr. Moncrieff, favour grammar and depreciate science." (Page 330.) This turning of the tide in the wrong direction, as many persons think, is sufficiently accounted for by the following considerations. In estimating the suitability of a subject for school education, we must consider not only its value *per se*, that is as knowledge, but its use as an educational agent in expanding and strengthening the powers of the mind, besides which it ought to be a subject suitable for an Examination paper. In the last two respects Science seems to me to have failed, while tried by this triple test no subjects have yet been found to equal Classics and Mathematics.

Of the Revised Version of the New Testament, which appeared more than three years ago, we have as a Society hitherto taken no notice, none of our Members having made it the subject of a lecture. Possibly some fifty years hence, should it by that time be generally adopted, together with the Version of the Old Testament, which we are daily expecting, this silence of ours may be sarcastically pointed to as a proof how incapable every age is of appreciating its greatest blessings. Yet our descendants can never deny that its appearance was awaited with the most eager interest; and it has had in many quarters a favourable reception. Eminent scholars have expressed approval of it, and many congregations have adopted it in their public services. And yet it can hardly be said to have fulfilled the just wishes and expectations of the country. That the discovery and opportunity of consulting so many uncial MSS. unknown to King James's Translators, notably, $\aleph$, A, B, C, D, should have necessitated some alterations in the readings was of course to be expected. What the people

generally felt (and the question will be decided in the long run by them, and not by scholars) was that the alterations and additions made by the Revisers were wanting in that happy vernacular style which has made both our English Bible and such authors as Shakspeare dear to the heart of every Englishman. Here I ought to speak with becoming modesty, as it is to one of the most influential of the Revisers that I owe, in addition to Classical and Mathematical lectures of no small value, my introduction to the great writers of England, whom he used to recommend as examples of "idiomatic English." But Professor Newth was only one of many, and when Truth is put to the vote, she must expect sometimes to be in a minority. Yet if the revised translation of the Old Testament be even equally good with the New, there is little doubt that the New Version of the Bible will gradually but surely supersede the one now in use. Of the vast number of articles, pamphlets, and books of which the New Version was the prolific parent, the greater number are destined to enjoy a very ephemeral existence. Not so with a great work which appeared soon after it, though it had been commenced long before—the Greek New Testament of Drs. Westcott and Hort, which has been designated the most important contribution to a knowledge of the Greek Testament that the present century has produced. The student who possesses this work, and can read it in the original, has the satisfaction of feeling that he is coming as near as it is possible for us now to do to the position of those who were privileged in the first instance to read the original autographs themselves.

The present century may be termed the Age of Teutonic Revival, as distinctly as the sixteenth was the Age of Classic Revival. The movement may be a more silent one, the animosity arising from religious differences (the most bitter of all animosities) may be absent from it, and no one need fear that it will be accompanied with a Thirty Years' War. In Devonshire we have seen during the present generation nearly every church in town or country built or restored, often with excellent taste, in the Gothic style. The literary movement, which originated in Germany with Grimm's *Deutsche Grammatik*, has shown itself in this country in a deeper interest in all connected with our National Language, Literature, and History. A similar movement, but not, I think, so strong, is going on in France; and Scandinavian learning, which has for many years had its seat at Copenhagen, has found a second home in this

country. And I need not remind you how the unification of Germany, which has been accomplished in our day by the valour of generals and the policy of statesmen, was prefigured by the dreams of poets and anticipated by the labours of grammarians devoted to the study of the language and literature of the German Fatherland. To Latham and Morris, as well as two Germans, Mätzner and Koch, we are indebted for English grammars, in which sound principles of historical criticism are applied to the investigation of our peculiarly difficult language. The Dictionaries of Latham and Skeat, and the great work of which Dr. Murray is the chief editor, and our respected fellow-townsmen, Mr. Jackson, one of the sub-editors, and of which we have just received the first instalment, together with the unfinished Anglo-Saxon dictionary of Toller, have done and are doing much to put English Etymology on a sound and scientific basis. The labours of these scholars have been much facilitated by the publication of many Anglo-Saxon and Old English works, which had previously existed only in MS. or in rare and expensive printed editions. Thanks are due to Mr. Arber for his series of cheap and careful reprints, and to the Delegates of the Clarendon Press, for their handy series of English Classics; while the Early English Text Society has for twenty years been issuing to its subscribers, as fast as its very limited funds have allowed, a most valuable series of carefully-edited and well-printed texts.

At a very early period a branch of the great Teutonic family defied the rugged soil and inclement skies of the North and took up their abode in Scandinavia. A terrible interest has always attached to this people ever since the days of Alfred and Charlemagne; but their literature has been involved in mystery, as dim and murky as the mists that obscure their native skies. I have said that their learning has found a home in England—a more peaceful invasion than that which took place a thousand years ago. In fact, it seems as if Iceland were now about to do all she can to atone for the ravages she then committed, when her sons carried fire and sword through every county of this peaceful island, but especially vented their wrath upon the monasteries, in which all the learning of the age was carefully deposited, and upon the monks whom they regarded as renegades from the faith of Odin and of Thor. To Guthbrand Vigfusson, the learned editor, and the Delegates of the Clarendon Press, the enlightened and public-spirited publishers, we owe an *Icelandic Dictionary* and *Prose Reader*, an edition of the

Sturlunga, and the *Corpus Poeticum Boreale*, containing the whole body of the poetic literature of Iceland with English Translation and Explanatory Notes. Mr. Vigfusson is now in Copenhagen preparing further texts for publication ; and as he has requested me to do all I can to encourage the Delegates of the Clarendon Press in this work, I shall best fulfil his desires by commending him and his work to your sympathy and support.

The greater number of Anglo-Saxon works being now accessible, the question is fairly before us, Is it desirable to substitute Anglo-Saxon for Classics as a school subject? With its somewhat complicated grammar, its four and in some instances five cases, its full declension of adjectives, a dual number in its pronouns, and its complete system of syntax, it would undoubtedly supply much of that grammatical drill which makes Latin so valuable as a means of education, and the want of which makes English so worthless. Again, as the parent of modern English, it explains many of its apparent irregularities ; while an acquaintance with its literature would throw light on the modes of thinking of our ancestors, and be a valuable auxiliary to the history of those times, besides which it would very well stand the third test I have previously laid down, as it could be made as good a subject for an examination paper as modern German. But in spite of all this it will never, I believe, take the place of Latin or Greek ; for first, Anglo-Saxon literature as a general rule lacks the charm of originality ; and that exquisite sense of beauty, which has made the masterpieces of Greek and Latin literature models for all ages, is almost entirely wanting in the ruder compositions of our forefathers. But why should I detain you by comparing the Anglo-Saxon, or even the more original Icelandic, with the languages of the greatest thinkers on the one hand, and the greatest actors on the other, that the world has ever seen? Shall we substitute *Beowulf* for the *Iliad*, or the *Heimskingla* for the *Annals* of Tacitus? Would the Anglo-Saxon *Chronicle* teach as much of men and manners as the *Decades* of Livy? or can any of the Icelandic Sagas vie in grandeur and beauty with the Greek Tragedies? Every impartial judge who considers what the Classical languages are in themselves, and their intimate relation to English literature in all ages, if not disposed to go so far as Matthew Arnold, who seems to make them synonymous with Culture, must at least acknowledge that there can be no complete Culture without them.

In this enlightened and patriotic movement the history of our country has fully shared. In 1776 Hume wrote to congratulate Gibbon on the appearance of the first two volumes of his *Decline and Fall of the Roman Empire*, and as Robertson had previously published two of the great works with which his name is associated, offered him a place in what he called the "Triumvirate of British Historians." The proud title was not an idle one, and has been fully confirmed by the verdict of posterity; and if the glory of these writers has somewhat faded during the present age, it is only because other historians have arisen, more patient in the scrutiny of original authorities, and masters of a more interesting, if not a more dignified, style. It may be a prejudice derived from the partiality of one's boyish days, but I cannot help regarding Macaulay as the inspirer and originator of this revived interest in the history of our country. Write down all his errors, say that he is not impartial, that he was the slave of prejudice, magnify, as it is easy to do, the faults of his style, the fact still remains, that thousands of Englishmen were first attracted by the irresistible charm of his writings to study the history of their own country, and experienced, as he had prophesied, that the effect of that study was "to excite thankfulness in all religious minds and hope in the breasts of all patriots." The youth of the present generation have never known an enthusiasm equal to that with which the first two volumes of his History were received thirty or forty years ago, and the eagerness with which we, who then were boys and girls, committed to memory whole pages of his glowing periods.

In the recent death of John Richard Green the Muse of History has had to mourn the loss of one of her truest and most gifted votaries, and while Clio's tears are still undried we would draw near and pay to his memory the tribute of respect. His constitution, originally delicate, was still further impaired by the too faithful discharge of his duties as a clergyman in the East End of London, but weakness of body could not check the ardour of his spirit; struggling with disease, his wasted form might be seen by the casual visitor propped up with pillows as he listened while some historical work was being read to him, or dictated the closing chapters of his last and favourite work, *The Conquest of England*. He possessed in an eminent degree those faculties which go to make the great historian. These are numerous, but two may be singled out for special mention—the love of humanity, which made him associate every spot in his

own country or on the Continent with some event in history, or an anecdote of some great man ; and an imagination which made the events of long ago as real to him as if they were present, and put life into the dry names of history, so that to him they were no longer mere names, but beings of like passions with ourselves, a faculty without which, as Emerson taught us long ago, there can be no true historian or dramatist. He is best known by his *Short History of the English People*, the later editions of which contain corrections of certain inaccuracies found in the earlier ones, and whose lively descriptions and breadth of sympathy must make it for many years to come a popular book, though it may not realize for its author the ambitious hope of the Historian of the Peloponnesian War of being a *κτῆμα ἐς αἰεί*.

Before attempting to write a complete History of England he made a special study of certain periods of it, and this is what has been done by Freeman and Froude, the former of whom has told the story of Old English History in a delightful form for young people, and that of the Norman Conquest with remarkable patience and erudition ; while the latter has devoted even superior powers to the elucidation of the period from the accession of Wolsey to the death of Elizabeth. Time would fail me to do justice to the remarkable ability displayed in this great work, and the attempt is the less necessary, as you all of course have read it. But permit me to recommend to you his *Julius Caesar : a Sketch*, which, more than any other work I know, enables one to grasp the life and times of the Great Dictator.

The work of the historian is becoming every year more heavy, owing to the constant publication of fresh materials, such as the *Calendars* of State Papers, and the *Chronicles and Memorials* of Great Britain and Ireland, which are called the Rolls Series, because issued by authority of the Master of the Rolls, to which must be added the publications of the Record Commissioners. These together form in themselves a valuable library of reference, and are indispensable to the student of history. If, through the interest of the Earl of Mount Edgumbe, we should shortly receive from Government, as is possible, a grant of several volumes of this series, the question will have to be answered, Where shall we put them ? Science and Art have now in this building halls capable to some extent of displaying their treasures. When shall Literature enjoy among us a local habitation where she may display her

treasures? Our present library is upstairs, and inconvenient of access, and its walls are already filled, so that if the Government or some generous individual, imitating the example set in many other towns, should make us a present of some hundreds of volumes a new library would be a necessity. Plymouth has now a Free Library and a Public Library, the latter providing popular works for the generality of ordinary readers. When shall she have a Library of learned books (and manuscripts if we can procure them) fit for the student in literature, science, and art? A thousand pounds would meet this urgent want, and put our Institution, as it ought at all times to be, out of debt.

In the realm of Literature the prolific fertility of our age has been regarded by some as matter rather for regret than congratulation. It is said that when such a large number of works of every kind is produced, of which a considerable proportion must necessarily be of inferior quality, the good will be to a certain extent swamped, and the taste of the reading public proportionately lowered. Undoubtedly much of our modern literature is of very ephemeral interest and slight construction, but this is due rather to the widening than the lowering of general culture. It is not that there are fewer readers of culture nowadays, but that the less educated classes are also becoming readers, and to meet the greater demand we have a large number of lesser luminaries. It is easy perhaps to point to the two or three greatest names of our time; but below these come others whose claims to notice fall very little short of theirs, and below these again many others in the slightest of gradations, till we are astonished at the wonderful literary activity that prevails around us. It is this above all that distinguishes the Victorian era of English literature, though in the number of great names to which it can point it is surpassed by none.

That age cannot surely be deficient in poetic genius which has produced such men as Tennyson, Browning, and Arnold. In Tennyson we have the greatest master of lyric utterance that England has ever produced. His writings enjoy—and deservedly so—a very high degree of popularity. This is owing, not to the lofty sentiments they express, or their elaborate character-drawing, but to their exquisite simplicity and beauty. His subjects are usually simple in outline, but filled in with the greatest delicacy and minuteness; not a touch but adds to their beauty, and not a beauty-giving touch omitted. His narrative verse is most perfect of its kind.

There could be no greater contrast to such an art as this than is presented by Browning. The author of *Sordello* turns away from the simple and natural to search for the striking and peculiar. Not only in his choice of subjects is he fond of oddities, but in his language he seems almost to strive to be involved and difficult. But if he is thus less attractive, to those who will overlook these things he presents a rich harvest to be reaped. In the number and power of his character-studies he is second only to Shakspeare; and his writings contain many passages of exceeding beauty, not only of thought, but of language also. He may aptly be called the Wagner of poetry.

Mr. Matthew Arnold's writings are full of a most delicate and subtle charm, the product of a sensitive and highly-refined mind. Except among readers of some culture he will probably never be very popular. Though not much accustomed to prophesying, we will venture to predict that when the post of Poet Laureate becomes vacant, the laurel crown, which now adorns the brow of Alfred Tennyson, will descend to Matthew Arnold.

Among lesser stars we may mention Dante Gabriel Rossetti, the poet-painter, whose death occurred only a short time ago. Little as he has written, he will not soon be forgotten, while there are readers left who love the weird and mystic, of which we have no finer specimens in English than some of his ballads, and his beautiful poem *Rose Mary*. In him and in William Morris we have the poetic side of that mediæval revival which in the art world is known under the name of Pre-Raphaelitism. In the latter—"the idle singer of an empty day," as he calls himself—we find a love and worship of beauty for its own sake; of beautiful images and ideas apart from all question of their moral worth, which form a striking contrast to the "obstinate questionings," the probing of the inmost recesses of the heart, the unfolding of the secret motives of action, which is carried to such a pitch in Browning.

Nor ought we to pass by in silence Swinburne, whose muse (unique in this among living English poets) is of a Radical and Republican turn, as we see in his *Songs Before Sunrise*. He is an ardent disciple of Victor Hugo; his sympathies are cosmopolitan, and he is as eager a watcher for the "dawn" of Republican freedom in Italy and other Continental countries as in our own England. He is chiefly noticeable, not so much for his matter, as for his peculiar power of expression, the melody and flexibility of his language, which enables him in *Erechtheus* to give us an

imitation of a Greek play which is especially happy ; the ease and swing of its choruses reminding us more of the Greek dramatists than any other English poem does. The tendency to go back to Greece for inspiration which Morris and Swinburne display is one of the characteristics of the age.

Not many years ago there passed away from us one of the strangest figures of modern times, that of the Scottish peasant, who, trusting to the light he felt to be in him, set himself to war against the darkness of his age, against its pleasant delusions, its cherished hopes, its comfortable doctrines ; who, in return, was accepted by that age as its oracle, flattered and caressed by society, and surnamed its prophet. Much of his crusade must appear to later ages fantastic and Quixotic. How could it be otherwise, when he acknowledged himself that the light which dwelled in him was half darkness ? Yet in his main purpose, in his honest and often painful striving after truth—truth in thought as well as word and deed—he really deserved much of the enthusiasm which he created ; and his influence on our literature can scarcely prove anything but beneficial. To later times the man, Thomas Carlyle, will perhaps be more interesting than his writings. When will a biographer come forward who will give us an adequate account of the *man*, of his rugged Scotch nature and breeding, his self-won education drawn from German wells, his intense devotion to his work, which was in truth the very life by which he lived, and yet which was ever a painful labour to him, to be wrought by the sweat of his brow ; his egotism, his vanity, his great sincerity and belief in his own mission, his acute sensitiveness to trifles—all those things which make him so marked an individuality ?

Of all branches of modern literature, we are told that the one which is the most active and the most sought after is that of Fiction. Yet, strange to say, we have no great living novelist.

Only a short time ago we lost, in Mary Ann Evans, *alias* George Eliot, one of the greatest novelists England has ever produced. The truth of her character-drawing, the breadth of her sympathies, and the beauty of her style, all combine to make such works as *Middlemarch* lasting treasures of the English nation.

Charles Reade was a pleasant and genial writer, as well as a zealous and eager opponent of wrongs and abuses. To his warm heart and graphic pen we owe, not only many a pleasant hour, but also the more humane regulation of our prisons.

Mr. Anthony Trollope's recent death has attracted special notice to his writings, which evince indeed no signs of genius, but are evidently the painstaking work of a typical and genial English gentleman.

Of living novelists, we may mention in terms of praise Mrs. Oliphant, the authoress of so many well-known and graceful writings; and Mr. Shorthouse, author of *John Inglesant*, which made some noise a year or two ago as a philosophical and religious romance.

The cultivation of Literature, together with Science and Art, is the object for which the Plymouth Institution was established; and in the dissemination of literary knowledge, and the diffusion of the literary spirit, it enjoys a history of which we have no reason to be anything but proud. During the years of my own membership we have had among us men of good natural abilities, of refined taste, and highly-cultivated minds, combined with all those graces of character that add affection to admiration, and love to respect—men to whom we were accustomed to point when we wanted to show how rich and valuable were the results of culture, and especially how the cultivation of Literature tends to elevate and refine. Some such we have still among us, but many are gone; we touch their hand, we hear their voice, no more. Such men cannot be too highly esteemed. They show us how life should be lived, and they help us to live it; for, to quote the words of another, with only the change of sex, "To love her was a liberal education." In such a connection perhaps it would be wiser not to mention names, leaving the exemplification to the memory and imagination of each; yet there are a few to whose memory, not only inclination, but even duty, seems to demand that a tribute should be paid, however brief. From the walls of this room one is looking down upon us with all the grace of the refined Christian gentleman and the intellectual power of the earnest student, but with more bodily strength and fire in his eye than he had, alas! when he was present at our discussions for the last time. In Dr. Tregelles we lost, not only a Biblical critic of European reputation, but a friend whose kindly help and well-stored library were always at our disposal. His edition of the Greek Testament, for which some of our members became subscribers, gained for him the honour of being appointed a Consulting

Member of the Revision Committee. Other names that will naturally occur to you are those of Alfred Rooker, Dr. Holmes, Dr. Weymouth, and Dr. Scrivener, the last two of whom are still honourably connected with our Society, and may yet again favour us with a visit and a lecture. These and others, well known by our older members, have laid this Institution in past years under heavy obligations. I wish that some of our young men could be carried back a few years, and be present at some of the lectures which these men gave us, and the discussions in which, like feudal knights of high renown, they afterwards engaged. Then the whole range of literature, ancient and modern, was laid under contribution, as Greek met Greek in fierce encounter. Sanskrit, Greek, and Latin; German, French, and Frisian; Icelandic, Welsh, and Dutch, were languages that were then, not rarely, but very frequently discussed, whether in respect of their grammar, literature, or scientific relations. Nor was our own language forgotten. Its earliest stages, as, in uncouth form, it began to lift its head after the Norman had in vain tried to trample it under foot; how it improved and expanded as the nation improved and expanded; all these, together with those infinite details which give such a special charm to language in general, and which are so often particularly puzzling in our own, were discussed, I think I may say, with an accuracy and depth to which it would be impossible to find a parallel in any non-University town in England.

And upon whom have their mantles fallen? or when shall these *Noctes Atticae* be renewed? Let no one plead the want of leisure; the men whose names I have mentioned were, I believe, none of them men of leisure—how rarely do we get much work from men of leisure!—and of two or three of them it might perhaps be affirmed that they were among the hardest-working men in Plymouth.

There is a *moral* element in the study of Letters, which seems to me to give them the advantage over other subjects, not so much as a means of intellectual culture, as of purifying the feelings, widening the sympathies, and of giving a harmonious completeness to the whole character, and so to realize the poet's description—

“A combination and a form indeed,
Where every god did seem to set his seal,
To give the world assurance of a *man*.”

They help one to fill and adorn every position in life, high or low; they are an ornament to the rich, and a refuge to the poor;

enabling us to take a broader and therefore more complete view of human life, they teach us how to judge more accurately of all its isolated details ; by the abundant precedents they supply of success and failure in the conduct of individual and national life, they show how men and nations may secure the one and escape the other ; they warn us, as with the blast of a trumpet, that injustice and wrong, though they may long escape with impunity, will surely be overtaken at last by Vengeance, who hobbles along with lame but inevitable step ; they are the delight of our youth and the solace of our riper years ; the source of wisdom and the source of power ; without them human life would lose half its charm, and human nature more than half its dignity.

The Literature of a community should be the highest concern of every individual member of it, for it is a mighty power, whether for good or for evil. It moves with irresistible force ; for it is the embodiment of a nation's thought, and the audible expression of its will. It acts and reacts ; expresses and creates conviction. The part it has played in the correction of abuses is well known to every student of history, and must be patent to every careful observer of the events of our time. We have already spoken of the effects of the work entitled *It's Never Too Late to Mend*, and this is no solitary example. The French nation might have been still groaning under the tyranny of an antiquated feudalism, had not Voltaire, like an athlete, arisen, and with his mighty pen dashed the chains asunder.

“ Il brisa les entraves de l'esprit humain.”

The United States would probably have been still struggling to rid themselves of the curse of slavery, had not a woman written a little book, which, like David's stone, entered the monster's forehead, and felled him to the ground. It has been frequently observed that some women are prettiest when they are angry, and positively irresistible when in tears ; and assuredly Literature is never so grand, never vindicates so clearly her divine mission, as when her heart is touched at the sight of cruelty or wrong, when she dashes aside with impatience all the sophistries of expediency and a false conventionality, and with eagle glance sees the proper remedy. Then she girds on her own peculiar weapons—weapons as ethereal and irresistible as those of fairy romance ; her breast heaves with the contending passions of sympathy and vengeance—sympathy for the helpless and oppressed, vengeance for the

perpetrators of cruelty and wrong ; tears are bursting, but cannot quench the lightning of her eye. Then woe to the enemy ! her victory is sure. She marches forth "fair as the sun, clear as the moon, and terrible as an army with banners."

But if Literature sometimes appears as an Angel of Light, she too often assumes another form, and breathes a different spirit. Her slain may be numbered by thousands, especially among the young, whose forms, once beautiful, created for religion and virtue, are lying at the bottom of a sea darker than Lake Asphaltites, while over them roll the waters of oblivion. We ask for no censorship of the Press. Milton has rendered this for ever impossible by his *Areopagitica* ; but what inquisitors of the most Rhadamanthine type cannot effect society at large may, and this Institution will not be true to itself unless it lends its aid. Who would not in pity guard the minds of those he loves from all demoralising books, when he sees the wretchedness of those whose spirit has suffered eclipse, or hears the cries that reach us from the shores of Kibroth Hattaavah ?

I have thus endeavoured to trace the course of Modern Literature as illustrative of one of the chief characteristics of our age, the Love of Truth, though the thread may often have appeared to be rather concealed from view, and this love of Truth, as I observed at the commencement, often assumes the form of doubt, though not, I believe, of doubt for its own sake. But this spirit of doubt, which is now so rife among us, and which I believe to be only one phase of the enthusiasm for truth, has created in the minds of some of the greatest and best of men the deepest anxiety and alarm. When they see so many of their cherished beliefs rudely questioned or stoutly denied, what wonder that they should fear that there will be nothing left from the crucible of modern doubt, and tremble for the safety of the Ark of Truth itself ? The author of *Apologia Pro Vita Sua* goes still further, and maintains that in all ages it has been found that no truth can stand against the destructive force of human reason ; that it is in fact a universal solvent capable of reducing even fine gold itself. With this alarm I have no sympathy whatever, nor, I believe, have you ; your presence here to-night, your position as members of this Institution disproves it. The universal uncertainty and unbelief existing in the Roman world in the time of Julius Cæsar, and which he seems to have shared, has often been referred to ; but what did

men question then? Only the childish fables, and worse than childish myths, respecting their gods which had suited a less reflecting and coarser age, but which the growing manhood of the race rejected as unworthy of its credence. And though we in the present day are undoubtedly passing through an anxious time on which ages of former criticism are concentrating their fury—in fact what the Germans would call a perfect period of “*Sturm und Drang*”—yet we may rest calmly assured that truth is too precious and too strong to be destroyed; the storm may rage through the branches of *Yggdrasill*, but only its weakly and rotten branches shall be broken off, and the very storms that rage round its head, and rock its mighty trunk, shall only cause its roots to take a firmer hold in the soil.

Let us take a single example. Flushed with their success in the investigation of natural phenomena (though it does not appear that they know more of the essence of things than was known before), scientists have not scrupled to enter the august domain of thought—conscience—will; to investigate them not with instruments of ethereal temper suited to their nature, but regarding them as attributes of matter, they entertain the hope of eventually destroying the distinction between Matter and Mind! It is the old story of the attempt of the giants to scale Olympus, and must end in a like confusion.

“*Sed quid Typhoeus, et validus Mimas,
Aut quid minaci Porphyryon statu,
Quid Rhætus, evulsisque truncis
Enceladus jaculator audax,
Contra sonantem Palladis ægida
Possent ruentes?*”

One source of our difficulties in the investigation of Truth lies in the limitation of our faculties, and this is one principal cause of the alarm felt by those to whom I have just referred. How often do we in our genuine but mistaken love of Truth do her violence by seeking to confine her within the narrow limits of our finite intelligence! Pascal observes in his *Pensées*, though he has expressed his meaning rather clumsily, that as Nature has stamped on all creation the impress of herself and her Maker, everything partakes of this twofold infinity. Let us then avoid dogmatism, let us cultivate humility, let us reflect in our fiercest disputes that both sides may be in the right, and wait for the time when, rising to a loftier height of contemplation, we shall see that what had

seemed to us discordant and irreconcilable views are but the parts of one harmonious and stupendous whole. Alpine climbers toiling from the base of some sky-pointing peak may be as far asunder at starting as the east is from the west ; but every upward step brings them nearer together till (all difficulties and dangers at last surmounted) they at length reach the summit, and find that their widely-distant paths were all concentrating towards one common point. The higher we rise the broader our views and the more charitable our judgments ; narrowness is the mother of bigotry.

Again, how often have we in this Institution observed how difficult it is for men to admit Truths which oppose their preconceived views ! When our missionaries go to labour in foreign lands, they find that the more elaborate the creed previously held, the greater the difficulty of introducing the new faith. Would that Bacon could have cast out from our minds those *idola* that he so well exposed ! But Truth is great, and must prevail, however unwelcome it may be, and there are many reasons why we should exercise patience. We should remember, that in a well-ordered mind as in a well-furnished house, we are not satisfied till everything occupies its appropriate place, and harmonizes with the rest. And as in our houses the introduction of a new piece of furniture causes temporary confusion till the rest has been made to correspond, so it is with our opinions. Hence it must be expected that new theories will meet with opposition, which will continue not only till we are convinced of their truth, but till we see how they can be harmonized with other opinions previously held.

I have spoken of the limitation of our faculties and the partial character of all our knowledge as one great difficulty to our seeing Truth in her full-orbed splendour and completeness. And while we cannot but regard membership in such an Institution as ours of unspeakable advantage in correcting narrowness of view, as we meet week by week, and, by means of our lectures and discussions, seek to supplement each other's knowledge, and suggest fresh lines of thought and new aspects of the subject considered, which had never previously occurred to us, thus giving greater completeness to our opinions and our knowledge ; allow me to suggest that we shall be defeating the great object of the Plymouth Institution if we attempt to narrow the range of our faculties, or to throw discredit upon or even disparage those high powers with which we are endowed because forsooth they are not purely intellectual.

Let us never speak of our intellectual powers in any other terms than those of the highest respect, only let us remember that they were intended to be subordinate and even ancillary to the nobler faculties of the soul. Has there been a tendency of late years in our Society to sink into mere intellectuality? If so, we have departed from the glorious traditions of the past, and have (so far) failed to walk in the steps of those great and good men by whom this Society was founded. As I stand here to-night these walls seem to re-echo words which were uttered on the occasion of the opening of this Classic Hall—the substantial evidence of the liberality and public spirit of men who have, most of them, now passed away from this scene of activity, but whose enlightened minds had regard, not only to their contemporaries, but also to their posterity. The Rev. Robert Lampen, who delivered the Inaugural Address on that occasion, made use of the following language: “Let us studiously *begin* with the regulation of the heart; let it be our first and supreme care to bring it under the discipline of Religion; let our diligence be worthy that sacred object of our ambition, and every accession of knowledge will then be an accession of happiness.” “These,” he adds, “are the essential principles on which our Society is established.”

How noble then is the object (as thus interpreted to us) which the earliest founders of this Institution had in view! Theirs was no narrow programme, their foundations were laid as broad as human nature itself. To inform the mind and purify the feelings by contact with the masterpieces of ancient and modern literature; to encourage habits of diligent research into the secrets of Nature’s working, that we may admire the beauty and order of this grand Kosmos, of which we form a part; to gratify and discipline our taste by the contemplation of all that is beautiful and inspiring in Art; to expand the mind, elevate the sympathies, and dignify the character, that we may become wiser and yet more humble, stronger, yet more ready to help the weak, and that in all the varied relations of life we may perform our part with greater ease to ourselves and advantage to others—these seem to me to have been some of the objects contemplated by our founders. It is for us to prove that we are not altogether unworthy of our high ancestry, by handing down this Institution, not only in an equal, but if possible higher state of efficiency to the generation following.

Obituary Notices.

CHARLES FOSTER BARHAM, M.D.

By the death, October 20th, 1884, of Dr. Barham, of Truro, the Plymouth Institution has lost its oldest corresponding member. The deceased gentleman came of the ancient Northern Foster stock, who distinguished themselves in Border warfare. The branch from which he sprang descended from John Foster, a settler in Jamaica in the seventeenth century. The widow of John Foster's grandson married Dr. Henry Barham; and he, having no family, adopted his wife's youngest son, Joseph Foster, and settled his West Indian property upon him on his taking Barham as an additional surname. The Barhams were a family of note, in later years distinguished by their literary and scientific attainments; and these qualities were remarkably developed in the Foster bearers of their name, though of course there was no blood relationship.

The Foster Barhams settled in England, and were largely connected with mercantile affairs in the firm of Plummer, Wilson, and Co. Joseph Foster Barham's eldest son, of the same name, was long member of Parliament for Stockbridge. His third son, Thomas Foster Barham, father of the subject of this notice, was an extensive traveller, and eventually settled in Cornwall. Hence the Cornish connection of Dr. C. F. Barham, who was born at Truro in March, 1804.

Dr. Barham studied at Cambridge (Queen's) and Edinburgh, and after his college career he travelled extensively on the Continent. He became M.B. in 1827, and M.D. (Cantab) in 1860. He first commenced practice as a physician in Plymouth, at which time he became connected with the Institution. From Plymouth he went to Tavistock, where he became physician to the Dispensary. Removing to Truro about the year 1832, he resided there until his death, a period of over half a century. In

1839 he married a daughter of the late Dr. Clement Carlyon, of Truro. During his long residence in Truro he identified himself in the most active manner with the welfare of the city, and became connected with every institution and society whose object was to instruct or do good. He was for many years a zealous member of the Royal Institution of Cornwall, and occupied its presidential chair. Among his favourite studies was that of meteorology, and he was a Fellow of the Meteorological Society. He was also a member of the Council of the British Medical Association; once president of the S.W. branch. He became corresponding member of the Plymouth Institution in 1856.

Dr. Barham was a sub-commissioner on the Children's Employment Commission, and was author of *Report on the Condition of Children in Mines*, *The Sanitary State of Truro*, *Parish Registers of Tavistock*, *Loss of Life by Burning*, *Accidents in Mines*, the contributor of many essays to the medical press, and compiler of numerous meteorological tables. In his papers connected with mining Dr. Barham evinced a very cordial interest in the well-being of the Cornish miner, advocating the better ventilation of mines, and the more general adoption of the man engine. He also warmly supported the Mining School scheme of the late Sir Charles Lemon. Dr. Barham was senior physician of the Royal Cornwall Infirmary, and consulting physician of the Truro Friendly Society. He was mainly instrumental in procuring the erection of the Truro Public Rooms, and some of the other public buildings of that city owe their existence in a great measure to his exertions—the Bishop's Library and the Diocesan Training College for Girls. When in his prime the deceased took an active share in the municipal affairs of Truro, and he was senior magistrate of the city, and at one time an alderman.

On January 26th, 1880, the high esteem and regard in which Dr. Barham was held found tangible expression in the presentation of a fine portrait of himself in oils, by Mr. H. Treffry Dunn. It now hangs in Truro Concert Hall, and bears the following inscription: "This portrait of Charles Barham, M.D., Cantab., is presented to the city of Truro and placed in this hall by a few of his numerous friends in recognition of his private worth and long and continued public services." His great attachment to the Royal Institution of Cornwall endured to the very end; for he was present at the last ordinary general meeting, and spoke on the

subjects discussed. He was even so warmly devoted to the Institution that he took part in the excursion of the members to the Lizard district. There were some features of archæological interest in that neighbourhood which he was anxious to see before the close of his life, and for that reason it was decided to make the Meneage district the scene of the visitation. Dr. Barham delivered one of the addresses at the opening of the 1831-32 session of the Plymouth Institution, on "The Progress of Literature," and during the same session two lectures on "Physiological Illustrations of History." He took an interest in all that concerned the Institution, and was one of the subscribers to the new museum.

OCTAVIAN BLEWITT, F.R.G.S.

A second corresponding member of the Plymouth Institution died during the year—Mr. Octavian Blewitt. He was the eldest son of the late Mr. J. E. Blewitt, who was intimately connected with the commercial interests of Plymouth, and took an active part in the affairs of the Exchange, Chamber of Commerce, and kindred institutions—becoming secretary of the Chamber in 1827. Mr. Octavian Blewitt was born in London, October 3rd, 1810; but from the fact of his father's removal to Plymouth, he received his education at the Plymouth Grammar School, and was essentially a West-Country man in his sympathies, as he was indeed by descent—his father being a native of Crowan.

Mr. Blewitt was a man of letters of industry and note. While still resident in Devon he produced one of the best local guide books ever written—*The Panorama of Torquay*, published in 1832; and he subsequently wrote Murray's Handbooks to Central Italy and Rome, and Southern Italy and Naples. For a time he edited the *Gardener's Chronicle*.

He is chiefly known, however, in connection with the Royal Literary Fund, of which he was the active and successful secretary for the long period of forty-six years. At the last annual meeting of that body the committee put upon record the severe loss which had been sustained by Mr. Blewitt's death, and their recognition of his untiring devotion to the interests of the Corporation, and of the great services rendered by him during his long tenure of office. At the same time his long and faithful discharge of his

duties was recognized by the grant of an annuity of £100 to his widow.

It was in connection with Mr. Blewitt's labours in this behalf that the late king of the Belgians presented him, through Chevalier Bunsen, with one of his gold coronation medals; while the present king, when presiding at the anniversary of the Fund, personally gave him the order of Knight of Leopold.

Mr. Blewitt died suddenly at his residence, Notting Hill, on the 4th November, 1884. He was elected a corresponding member of the Plymouth Institution in 1857.

CONVERSAZIONE.

(October 2nd, 1884.)

For an account of this, see the Report of the Secretaries.

THE OLDER CHARITIES OF PLYMOUTH.

BY R. N. WORTH, F.G.S., ETC.

(Read October 16th, 1884.)

THE fact that there are extant a series of official reports on the Charities of this kingdom may seem to some to render the work undertaken in this paper unnecessary. Those, however, who are familiar with these documents, and especially with the report of the first enquiry, upon which all the others are based, will know that the reports are often fragmentary, often inaccurate, often perfunctory; and moreover that in the earlier investigations, more particularly, the standard of judgment was not that which would accord with the clearer views of the present day. The original Commissioners were not wholly to blame for this. They had in hand a difficult and a novel task, and they met with hindrances on every side. Here from sheer laziness, and there of set purpose, they were kept in ignorance of matters it was essential they should know; and documents were reported to be lost, which not only did exist, but were easily accessible. Their report upon the Plymouth Charities, which they examined into in 1820, is neither better nor worse than most of its fellows; but it is meagre and inexact to a degree that deprives it of fully half its value, and in many points is seriously misleading. Moreover, from the necessary limitations of the enquiry, it does not deal so fully with the beginnings of the Charities as historically is desirable, and its biographical hints are scanty in the extreme. The object of this paper is to supply the deficiencies thus indicated—to trace from original sources¹ the inception of the various Charities included within its scope; to indicate their first character and purpose, with the changes that have taken place in their operation; and to recal the memories of a host of forgotten benefactors of the ancient town of Plymouth,

¹ Not a single statement is given second-hand where an original document is available.

whose names have long been hidden under the dust of ages, and whose tardy recognition must in some cases dethrone other men, to whom their good deeds have been appropriated.

I am not without hopes that the retrospect, by no means wholly satisfactory, may have its value also in emphasizing the present need of widespread reform in relation to our endowed Charities. One point upon which I would lay special stress is the evidence afforded of the need for an extension of the principle of the Mortmain Acts, to the prohibition of the locking up of any real property in charitable endowments. The only charitable freeholds sanctioned should be those of lands or houses absolutely in possession and use. Not only is the contrary course, as I believe, opposed to the welfare of the nation, but (and this chiefly concerns us here) it has been a fruitful source of neglect and fraud. The interests of Charity property have, as a rule, been nobody's interests; decay and dilapidation have been suffered unchecked; tenants have turned leases into freeholds; trustees have fulfilled the letter of their trusts and pocketed the unearned increments; neighbours have encroached, and bit by bit nibbled away field after field; rent charges have been withheld because it has been known that the Charities to which they belonged were too poor to fight. From all these causes the Plymouth Charities have suffered.

Under the head of our Older Charities I include all those established among us prior to the end of the seventeenth century. Nor is the line thus drawn a purely arbitrary chronological limit. It comprises, not only Charities of which the origin has been lost in antiquity, but the whole of the charitable work of that great Puritan age, which is the most glorious period in the history of Plymouth. The century between the accession of Elizabeth and the death of Cromwell is the proudest epoch of our corporate life. Throughout that hundred years, with hardly an exception, our mayors were men of mark, and our "twelve and twenty-four" sturdy burghers, who respected the rights of other people, and who jealously maintained their own. Of the threescore mayors who by turns held chief sway in Plymouth during this period, there were not a dozen who did not enter more or less heartily, and in no formal manner, upon undertakings of pure benevolence—building hospitals for the poor, asylums for the orphan, almshouses for the aged; feeding the hungry, clothing the naked; finding work for the unemployed, capital on easy terms for the struggling tradesman,

and free education for all who sought it. While Puritanism prevailed in Plymouth such good works went steadily on. Old Charities were conserved and new ones created. Hardly a will in these days seems to have been considered complete without some recognition of the needs of poorer brethren and sisters ; and many were the Plymouth folk, thriving far away, who remembered the necessities of the humbler dwellers in their native town.

But with the Restoration a new era dawned. Philanthropy was soon at a discount. True, a few earnest men and pious women continued for a while the traditions of a better time ; but, so far as the community at large was concerned, there set in a period of corruption and sycophancy, which towards the close of the last century transformed the Corporation that had dared to hold its own against a king into a knot of time-servers, ever at the bidding, for the sake of loaves and fishes, of the Ministry in power. The Charities were neglected, mismanaged, plundered ; some disappeared altogether, others were diverted to alien purposes. Mischief was then done that can never be retrieved. The reputation of Plymouth and of Plymouth's public men would lose little and gain much if the eighteenth century could be blotted wholly out of its annals.¹

With these preliminary observations I proceed with our enquiry.

THE MAUDLYN.

It is much to be regretted that we have practically no materials for the history of the Maudlyn, or Leper House, at North Hill, which occupied in part the site of the present Blind Asylum. If not the oldest of the Plymouth Charities, which is probable, it must have been of great antiquity ; and yet its notices are very few and very indefinite. I should not be at all surprised some time to learn that it dated from the fourteenth century, or even from the thirteenth. Frequented seaports in the Middle Ages were peculiarly liable to be assailed by leprosy ; and a town which attracted by its necessities at such an early date Franciscans, Carmelites, and

¹ Under the operation of the Municipal Reform Act the management of the municipal charities of the Corporation was transferred to a body of trustees specially created, with whom it remains ; and the Corporation are now held responsible to them for a capital sum of £525, and an annual payment of £25 7s., made up as follows : White's Gift, £11 15s. ; Hewer's, £4 ; Baron's, £2 ; Collins's, £2 10s. ; Hill's, £2 12s. ; Ackerman's, £2 10s.

Dominicans, must have been very exceptional if it did not both need a leper-house and have its needs supplied. Nevertheless it is not until the sixteenth century that the existence of such an establishment in Plymouth finds record; and the general absence of reference to it in the Corporate accounts seems to point to its having had an independent status. Some payments, however, are noted; and one of these being 5s. for a hundred of reed, we may be tolerably certain that the house was a thatched building.

It has been stated that the Maudlyn of Plymouth was dedicated to the Trinity and St. Mary Magdalene, and that it was the occasion of a dispute with the Prior of Plympton in 1370, at which date it was said to be of unknown antiquity. This, however, is an error, which arose from confounding Plympton and Plymouth, the lazar-house of Plympton being that really in question. The only important record concerning our Maudlyn House is the entry in the Chantry Rolls (1547) that there was then in Plymouth an almshouse called "Goddeshowse for the releife of impotent and lazare people with owte any certayne nomber appoynted." At the date of this report there were fourteen inmates; but sometimes there were twenty, more or less, "as the occasyon of tyme dothe offerr." Beside their "mansyon howse," they had the rents of lands given by different benefactors, amounting to £14 7s.

The Maudlyn is mentioned in 1569 as the subject of an intended gift by William Weeks, and it is shown in the Cecil and British Museum maps of the Plymouth Leat as existing about thirty years later. When it disappeared we cannot say, but it must have been somewhere within the next half-century, since at the siege the site was occupied by a fort. It is quite possible that the siege was the cause of its destruction; for we have the record of a sale in 1648 to John Martyn of land "neere the late howse called the mawdlyn howse . . . neere Plymouth," which appears to indicate a very recent removal. The road leading thither was long afterwards called Maudlyn Lane.

The property of the Maudlyn was no doubt vested, as was customary with these establishments, in the residents, who commonly formed a corporate body. It may, therefore, have been alienated by the last survivors; but it does appear strange that I have never been able to find any trace of its existence, though it must have been, if land, of considerable extent (according to the current average rental, at least 100 acres); while if it consisted of

houses, there must have been several. None of it can be followed in connection with any of the other charities of the town, though there are properties belonging to some of these of whose dedication to charitable purposes there is no record. But it hardly seems possible that it can have passed into or through the hands of the Commonalty without some evidence of the fact. The Maudlyn may have held property in the town under the Corporation, though it does not appear in the ancient rentals under that name; for there is a record in 1491-2 of rents paid by the "wardens of St. Mary," and this *may* mean St. Mary Magdalene.¹

THE ALMSHOUSES.

The "Almshouse of Plymouth," known in late years as the Corporation Almshouse and the "Old Church Twelves,"² is the most ancient charity existing in the town. It finds mention in the oldest Corporation rental extant (6 and 7 Henry VII., 1491-2), in which the Wardens of the Almshouse (Custod domq Elosinar) are set to pay 2s. 4d. No doubt some, at least, of its belongings formed part of the manorial property which passed to the Mayor and Commonalty under the Act of Incorporation from the Priory of Plympton; but whether the house itself existed before that time is uncertain. Still there are grounds for believing that it did. Its destruction in 1868 revealed the semi-Norman arch now in our Museum, which unquestionably formed part of the original Church of St. Andrew; at least, there is no other local building to which it can be assigned. This would carry back the erection of the Almshouse to the date of the substitution of old St. Andrews by the present fabric, unless the arch had formed part of another building in the interim. And for the Church reconstruction, the only dates we have are the erection of the south aisle of the Virgin in 1385, of the north aisle of St. John the Baptist in 1441, and of the tower about 1460. No doubt the Almshouse was the "Hospitale House" mentioned by Leland "on the north side

¹ The house of the Fraternity of Corpus Christi—the Municipal Guild—passed to the Mayor and Commonalty. In 1610 we read: "William Brooking and John Brooking for a Tentt adioyning to the Church yard wherein Robert Stephens weaver nowe dwelleth, knownen by the name of Corpus Christ house, wth the garden to the same house adioyning on w^{ch} garden certen dwelling houses are buylded. viijs."

² Simply because it stood by the Church in Catherine Lane, at the eastern end of the Municipal Buildings.

of the chirche;" and as in the latter part of the fourteenth century Plymouth was a flourishing and wealthy town, it is at least fairly probable that both the Almshouse and the Maudlyn were founded at that period. The Almshouse, if we may trust the comparative features of the rental cited, was well-to-do in the reign of Henry VII.; for against the 2s. 4d. paid by its wardens, the wardens of "St. Andrew of Plymouth" paid 6d. only; those of St. Mary the same; the holders of the Holy Cross (Ten sci crucs) the like amount; the Fraternity of Corpus Christi, 1d.; and the Prysten House (Domq psbiteros), which came nearest, 2s. 1d. And there are other reasons for holding that even thus early it had been somewhat liberally endowed. The old records of the Borough Court mention at this date the existence of a toft in the south of Buckwell Street belonging to the Almshouse. The next mention of property I have found is an entry in the White Book that the deeds of lands given by William Randall to the Almshouse were put into the Corporation chest September 26th, 1561. Moreover, on the 1st December following it was "given to understand" that Johanna Lake had left the remainder of her lands to the Almshouse. Also that "Mother Hacker" had given a piece of land upon "Crosse Downe" (it immediately adjoined the present Workhouse site, east and south) to the Almshouse after the death of Thomas Clowter; while Clowter, on his part, gave to the same charity the reversion after his death of a house at Briton Side.

And when four years later (1569) William Weeks (Mayor 1549-50, 1558-59), for reasons which do not appear, bound himself to make certain gifts to the town (including payments of £4 to some good use; of 20s. each to the poor men's coffer in the church and to the Almshouse; four good wainscots and 3s. 4d. towards making of "puys" in the church; a pledge to maintain and repair during his life the "cause" at Coxside which he had built; and a promise of 5s. to the poor people at the Maudlyn), he promised to leave 6s. 8d. a year, out of whichever house of his the Corporation might choose, either towards the repair of the Church or to the Almshouse, "which ye like best."

There are some curious references in an account of Nicholas Slanning, Town Clerk, against the Corporation in 1566, which deals mainly with expenses incurred about the vicarage, but also touches the Almshouse. Ten shillings are paid to Mr. Peryam (William Peryam, who sat for the town in Elizabeth's first Parlia-

ment) for drawing a bill "to be layd in the plyament howsse for the almeshowsse;" and Mr. Fletwoode has another 10s. for his services in connection therewith, including speaking "in its favour in the howsse." Moreover the "sergeant of plyament" had 5s. (and subsequently a shilling more) to put the Speaker in mind of the Almshouse Bill. I am not aware, however, that any Act of Parliament was actually passed.

The original Almshouse was probably an important building. It had a chapel, licensed by Bishop Lacy in 1540—*capella hospitalis prope cemetarium ecclesiae parochialis*. Moreover, the site was originally much more extensive than the remnant which continued to the present generation—with herb-garden, orchard, fields, and barn. 38th Elizabeth Serjeant Hele let to his servant, John Ryder, a close of land and quyllet of meadow between the lane leading from Plymouth towards "the late salt mylle" of the south, the lands of the Almshouse west, and "the old mylle poole called Soure poole" north. And within the next half-dozen years the nature of an encroachment is specified in a lease granted in 1602 to Robert Trelawny, of two houses newly builded on part of "the gardaine of the almeshouse of Plymouth north of the same, adjoining the lane leading from the West Churchyearde stile towards Stonehouse . . . and in the southside of the same waie, in the west parte of the said churchyearde and of parcell of the Schoolehouse there." These houses with gardens adjoining reached twenty-five yards from the churchyard, to the door and way leading into the Almshouse barn.

An early benefactor of the town of Plymouth was John How, priest. He bore the same name as the last Prior of Plympton, but there is no direct evidence to show whether the two are one; and a John How appears as paying 3s. 6d. in the old Town Rental already quoted, 6 and 7 Henry VII. I am inclined to believe, however, that the John How who founded the charities and the prior are the same. The bill is still extant under his hand and seal, dated September 30th, 1563, in which How gives to John Derye, Mayor of Plymouth (also 1557-8), and John Forde, alderman (Mayor 1555-6, 1562-3),

These pcells of goods here specified, to weite, one clothe of blew velvet imbrodred w^t flowers of venys gold & silek. Also one white sute of vestyments for priest diacon and subdiacon w^t one Cope of the same sute of silke.

Also one red sute of vestyments for priest diacon and subdiacon w^t x Copis of the same red sute. Also one other red sute of vestyments for priest Diacon & subdiacon w^t one cope of the same sute, to this intent & ende that these forsaide pcells of goods may be solde by the said M^r John Derye & M^r John Forde. And that the mony recaved for the same goods be distrybuted vnto the power accordyng their wisdom and descretion.

A letter from How, dated "at M^r Willm hychyns howse at hawle the xxx of January"—the year not named, but addressed to Derry as Mayor, and therefore in 1564—thanks the Mayor and his brethren for their liberal gifts,¹ and states that he had "appoynted to disb^rus twenty pounds in mony to be paid by you & yo^r towne to my frynd Nicholas Barfot to the intent that he shalbe one of them that shall ex^rcise the crafte of clothe wevyng w^tin yo^r towne. And that he be bownd in forty pounds to pay an yerely rent to yo^r towne of xxvj^s viij^d yerely to be paide, vntill suche tyme as the saide Nicholas his heirs executors or assignes make vnto yo^r toune a sufficient state of lands or rent of the clere yerely valew of xxv^s to the use of the pow^r. And that he be bownd to make that state w^tin xij yere next ensuyng." A post-script says that it is to be specified in the covenant that the first quarter's payment of this rent is to be at the feast of the Annunciation, 1565. How desires to be heartily commended to the Mayoress, and commends the Mayor "to the grace of god which eu^rmore p^rsue you."

There is another letter of a somewhat similar purport from How, dated 27th April, 1565, in which he desires that out of his moneys the Mayor and Commonalty should advance (the letter is addressed to Derry and Ford) to his servants, William Morgane and Richard Morgane, and to Stephen Hechings, £20 each, upon due security. They were to have these sums interest free for the first year; but each year thereafter were to pay £1 6s. 8d. until they should each assure "unto you for the relief of the poor people" lands or tenements to the clear yearly value of 20s. for ever.

How seems to have died not long after this letter was written, certainly before the close of Derry's mayoralty; for on the 21st September following Robert Bekett, his executor, who lived at Cartuther, writes to the Mayor cautioning him against giving up "cteyne Coopes" which "crteyne men doe gredely seke to haue

¹ There are entries of his being entertained, and presented with sugar and marmalade, &c.

them out of yo possession," and stating that he intended to see his friend's will carried out.

The final issue of this was the grant, October 3rd, 1566, by John Derye and John Forde to the Mayor and Commonalty of £100, the proceeds of How's gift, on condition of the payment of £6 13s. 4d. annually to the widows of the Almshouse of Plymouth.

How, however, had previously given a large sum; for the "White Book" records, under date December 16th, 1565, that Richard Hooper (Mayor 1548-9, which may help to fix the date of this donation) and John Hooper were to make proper conveyance of How's gift of £8 a year, or to be handed over to Mr. Beckett's care. How was also the chief donor in 1560 towards the large bell for the town.

There are a few imperfect accounts of How's Charity during the reign of Elizabeth yet extant. In 1567 the total sum apparently amounted to £180; for there are entries of the following loans, for the most part at 10 per cent. interest: William Hawkins, £40, interest £4; Richard Morgan, £20, 40s.; Mr. Yelcombe (Ilcombe), £20, 40s.; William Gyll, £10, 20s.; John Feltwell, £10, 20s. This £100 is set forth to itself. Then follows an account of £80: Rychard Hoper, £20, 40s.; Mr. Yelcombe, £20, 40s.; John Hoper, £40, £4; Nicholas Barfeat, £20, 26s. 8d. The total interest was thus, in 1567, £19 6s. 8d. In 1570 the amounts due on loan were: W. Hawkyns, esq., £17; John Derry, £14; John Ilcombe the elder, £11; William Byll, £14; William Morgan and Mr. Beckett, £20; W. Ferneworthy, £11; William Bound, £25 6s. 8d.; Gregory Cock, £43; the town owed £6 for interest of £20; and there was in Walter Peperell's hands, "that Mr. Martyn had," £10. The receipts in 1583 were £19 17s. 8d., the highest noted; and the regular expenditure was 10s. for a dinner; 3s. 4d., town clerk's fee; 20d., sergeant's fee; and 6s. 8d., "my fee;" "other charges" not adding materially to the total.

How's Charity has now for many years been represented by the payment by the Corporation of £14 13s. 4d., under two agreements, for the occupants of the Almshouse.

The oldest existing accounts of the Almshouse Wardens date in 1729 (not 1783, as stated in the Report of 1820), and set forth the town rents "allotted" by the Mayor and Commonalty towards the maintenance of the people in the Almshouse. But these rents were

the rents of properties belonging to the Almshouse, and not to the Mayor and Commonalty at all; and while the Charity had to be content with these merely nominal yearly payments, the Mayor and Commonalty aforesaid long before that date had learned to appropriate the fines levied for the granting of fresh leases, which in the aggregate was not less than £1000 a turn!

From Town Surveys and other sources we learn that during the seventeenth century the Almshouse estate comprised the following properties: Close at Coxside, $1\frac{1}{4}$ acre; Roper's Piece (which was "landscore" land, by the West Hoe); Mayes Cross; tenement at Underwood, in respect of which 3s. 4d. was paid to the Mayor of Plympton; Tamelarie Closes (2) and Bickland, adjoining Cross Downe, and an enclosed part of Cross Down; Almshouse Park and other closes at Borrington, 11 acres, 5s. high rent paid to Mr. Harris; and houses, &c., in Lyneham Street (2), Stilman Street, Whimple Street, Patherick Street, Southside, Vennell Street, by the Almshouse (2), Tin Street (2), Trevill Street, Green Street (2), High Street (2), Looe Street (2), Batter Street (4), near the Church Stile (4), Finewell Street, Briton Side, Hoe Lane, Buckwell Street, Woolster Street (2), Peacock's Lane, Kinterbury Street, and "near the Old Castles," formerly Mr. Sparkes'.

And we find, on the other hand, in a rental of 1610:

The Wardens of the Almeshouse for certen lands	viijs viij ^d
Of them for the Tenem ^t lying in the north side of Loostreat wherein John fryer the sadler latelie dwelt w th the Curtilage and herbe garden adioyning	vj ^d
Item pd to y ^e Almeshouse wardens for y ^e Tente in y ^e southside of y ^e Church stile in y ^e tenure of John Sheperd	xij ^s

In 1615 and following years the Almshouse Wardens had 12s. for the rent of a house in which "thold myles" dwelt; and in 1630 Richard Tapscott had £2 for one year on account of the Almshouse, in consideration of £40 which remained in Mr. Colmer's hands.

Among further notices of old Almshouse endowments and property are the following:

Oliver Harry, of Plymouth, by his will in March, 1595, left small bequests to the poor people of the Almshouse and the Maudlyn. Edmund Fowell (town clerk), in 1659, granted a rent-charge of 10s. for the Almshouse out of land adjoining the road leading from Hampton Shute to Plympton; and John Lanyon, in 1674, left £50 to better its revenues, which cannot now be traced.

Under the Act by which the Guardians of the Poor were incorporated (1708), it was provided that *all* the public almshouses in the borough should be transferred to that body: "All and every the Alms-houses, or Houses commonly used for the Habitation of Poor People, lying within the said Borough or Town, as are belonging to the Mayor and Commonalty of the said Town, or to either of the said Two Parishes." Nevertheless in some mysterious way the Corporation have stuck, and do stick, to the "Old Church Twelves"—though in a new form—as the sole illegal remnant of their charitable trusts. The reason for this retention in direct defiance of the Act of Parliament does not seem to have occurred to the Commissioners, who took things very much as they found them. It is perfectly clear, however, when it is seen how valuable was the Almshouse estate, and how profitable its management to the Mayor and Commonalty. To hand over the Almshouse would have involved the surrender of the property; for the pleasant fiction that the rents had been "allotted" to the Charity would not have stood the test of enquiry. There being no transfer, there was no enquiry, and matters continued on the same footing. The properties were leased, commonly for ninety-nine years on lives, on substantial fines, for nominal rents, which latter were all that the Charity received. Thus at the beginning of the present century the endowments of the Corporation Almshouses comprised: "£6 13s. 4d. from the Mayor and Commonalty in accomplishment of their indenture with John Ford and John Dery (How's Gift); £8 for the accomplishment of another pair of indentures between them and John How, Clerk; devisees of Mr. Clark for the Manor of Sutton Pill, 2s. 8d.; chief rent of Doidge's Garden, 6d.; annuity out of two fields late Gilwell's, 10s.; from the Orphans' Aid for the Latin School, £1 2s.; Rawlyn's Gift for butter on fish days, £3; Conventiary Rents of small amounts for properties near the Church Stile, How Street, Woolster Street, Basket Street (four houses), Finewell Street, Reed's Garden, Buckwell Street, Batter Street, Tin Street, Synagogue, Colmer's Lane, Lower Street, Pike Street, High Street, Loader's Lane, Bilbury Street, Little Hoe Lane, Tamalary Closes, May's Cross, Burraton, and Underwood." These properties were treated as purely Corporate properties when the sale of the Corporate estates was effected, some half-century ago, and the proceeds of the sale put into the Corporation pocket. The rents, however, were regarded as a con-

tinuing liability. At present a definite sum of about £80 is annually paid out of the Corporate funds towards the support of the widows in the newly-erected Corporation Almshouse in Green Street. Moreover, the Municipality keep the entire block in repair.

We take the other Almshouses in chronological order.

The foundation deed of Fownes's Almshouse exists in counterpart among the muniments both of the Corporation and the Guardians. Nevertheless no document relating to this Charity could be found to be produced before the Charity Commissioners at their original enquiry. The reason for this lies possibly in the fact that the Almshouse had been demolished, the site sold, and the money appropriated to other purposes without legal authority, not many years before. The deed, dated 1628, recites that Thomas Fownes (Mayor 1610-11, 1619-20) had lately created and "new buylt the said Hospitall and Almeshouse conteyning thirteene roomes." The almspeople were to be elected by the Mayor and Commonalty, with the "assent and agreement of Thomas Fownes and his heirs for ever; notice of every election being given 10 days prior at his dwelling-house in Vintry Street." This Almshouse did pass to the Guardians under the Act of Incorporation. It lay between Bedford and Basket Streets, with a frontage of 54 feet to the former, and a superficies of 2859; and was for twenty-four decayed and aged people. Having been suffered to become dilapidated, it was called a nuisance, and in 1808 was pulled down, and the ground sold for £500 to the Mayor and Commonalty, as portion of a site for the proposed hotel and theatre. When another position was chosen for that building, part of the site of the Almshouse was thrown into the street. The money is stated to have been laid out on the Workhouse; but the Charity Commissioners questioned the right of the Guardians to dispose of these buildings, and it now seems with good cause. The building was said to have been allowed to fall into decay because there was no endowment; but I do not see how this can have been, when in September, 1656, we have Timothy Alsop acknowledging to the Mayor and Commonalty that he owed the Charity £100 with interest.

The history of Miller's Almshouse is still worse. Alice Miller, about 1655 (in which year £10 was paid in lieu of stones

promised her by the town towards building expenses), erected an Alms-house "in the churchyard" (St. Andrew), containing ten rooms, for twenty people; and in May, 1660, endowed them with a rent charge of £10 a year, out of her estate at Broadley. Under her will, August 30th, 1664, she left Broadley, so charged, to her cousin, Richard Burdwood; and in March, 1681, James Burdwood, his son and heir, the rent being in arrear, and the premises "for the most part waste and unoccupied, and encumbered beyond the value of the inheritance," conveyed the estate to the Mayor and Commonalty, and the proceeds were applied for the benefit of the almspeople. When the estate passed to the Guardians, under the Act of Incorporation, it was under lease to Richard Opie at £6 a year only; and notwithstanding this enormous depreciation in value since 1660, when the £10 rent charge left a surplus, the Charity Commissioners reported that there was no reason to believe any of the property had been lost. To me the evidence seems quite the other way; and the minute books of the Guardians in later times contain numerous complaints of encroachment by the various lessees, who, subsequently to Opie, included the Burdwoods, Sir Masseh Lopes, and Sir Ralph Franco. No map, however, exists by which these points can be settled; and all that can be definitely said is, that a farm which was worth over £10 a year in 1660 could not have fallen to £6 in 1720 without loss or malversation of some kind.

Anne Prynne's Almshouse, adjoining Miller's, was erected in 1651-2; for there is a record under that year of two elm trees being cut down in the churchyard, "for the better building of Mrs. Prynne's Almshouse there." The next year she is recorded as having left an annuity of 10s. a year, charged on a house in Notte Street, for the "preching of a sermon yearlie for ever on the Third day of December in Remembrance of the Townes then deliverance from the enemie anno 1643;" and this amount was received by George Hughes. No information concerning this Charity was vouchsafed to the Commissioners, save the one fact that both Prynne's and Miller's houses were pulled down for the improvement of Bedford Street in 1791, the materials being sold by auction, and the trustees of the Stonehouse Turnpike giving £100 for the land. The Commissioners questioned the authority to sell, but considered that the money received in this case, as in

that of Fownes's, had been spent beneficially in building a school and an infirmary in the Workhouse. A committee minute of the Guardians avers, however, that the Pigmarket Almshouse (Fownes's) was re-erected at the west end of the Workhouse Yard. £10 of the rent of Broadley is now applied to the occupants of the Almshouses in Green Street.

The destruction of these Almshouses was attended by unpleasant consequences to the occupants, who naturally were disinclined to leave the shelter to which they had as good a right as the Mayor of Plymouth to his house. When Fownes's came to be destroyed, Mr. Henry Woollcombe wrote, on behalf of the Guardians, to the Corporation: "Sunday noon, Jan. 3, 1808. . . . As I find I shall never get the inhabitants of Fownes's Almshouses to quit until they perceive that the building is actually taking down, may I beg the favour of your proceeding to do so forthwith. I will inform the people to-morrow that on that day se'nnight the workmen will begin to take it down."

With these facts before us, perhaps we may put a different value upon the work of the gentlemen who recorded their good deeds on the tablet in the old wall of the churchyard, and set forth at full length how they had "beautified" the town by pulling down filthy and loathsome Almshouses. Probably there is no readier way of getting rid of a Charity than to neglect it until it falls into decay, and then to demolish it because it has not received attention.

The original New Church Almshouse in Green Street was founded by John Lanyon (Mayor 1672-73), who by his will, September 15th, 1674, gave £300 to the use of the poor people of Charles, for building an almshouse. The site was conveyed, October, 1678, by John Trelawny the elder (Mayor 1686-87) to John Martyn (Mayor 1664-65, 1691-92) and others acting on behalf of the Corporation, the cost being £50 3s. The almshouse was built thereon, and conveyed by Martyn and his coadjutors to the Mayor and Commonalty, September 26th, 1680; and it remained so vested until the Act of Incorporation. Lanyon's bequest being insufficient, £100 left by John Gubbs to the poor of Plymouth, and other monies, were applied to the same purpose.

After the demolition of the Almshouses of Miller, Prynne, and Fownes, there remained only the ancient Almshouse—the "Old

Twelves," in Catherine Street, a small Almshouse "Behind the Twelves," belonging to the Guardians, and the "New Church." When, in 1868, the Guildhall site had to be cleared, and the Church Alley Almshouses removed, an arrangement was made by which the New Church Almshouse was rebuilt; and the Almshouses of the Corporation and the Guardians now form one block, with additional accommodation. This, if somewhat tardily, may be held to have partially atoned for the old misdeeds.¹

EDUCATIONAL ENDOWMENTS.

The misreading of a date by one original investigator, has caused the foundation of the Grammar School to be antedated sixty years, and assigned to the reign of Henry VII. instead of that of Elizabeth. "Always verify your quotations" was Dr. Routh's dying advice to his friends; and the historical enquirer who does not test his materials whenever possible by the original documents is guilty of something more than mere carelessness. It was, then, in 1561, and not in 1501, as was hastily thought from the indistinctness of the third figure in the date, that the Corporation of Plymouth founded the Grammar School, by private subscription. I quote the formal entry in the White Book, with the list of subscribers :

xiiij Die July 1561.

In the guilhaile w^t thassent of John Eliott Maio^r w^t the more pt^e of the xij and xxiiij^v ther assembled it was determyned concluded and vtterlie agreed vpon that one Thom̄s Brooke should supplie thoffice and function of a teacher or Scholem^r wⁱⁿ this towne so longe as he therin shall decentlye behave hym selfe and in consideracion of an annuall stipend of x^{li} quarterly to be paid by the receivo^r he the said Scholem^r shall freelye teache all the children native and inhabitaunt w^t wⁱⁿ the Towne and that he also for his lodginge and refuge shall hawe to his owne vse the chambers over the almes howsse chapell and the said chapell for his scholehowsse and that he shall teache no other but gramer and writinge. Itm ther it was by thassents aforsaid fullie agreed that all suche psons whose names be herin ingrossed as hawe given anye some or somes of moneye toward and for the stipend aforsayd shall for nonpayment of such somes of moneye as they of ther mere good willes hawe gyven toward the vse aforsayd be Distreyned and Distreinable for the same.

¹ Jory's Almshouses at Coxside do not fall within the scope of this paper, as they were founded in 1702. They were erected for twelve widows, and endowed with various properties; and are managed by a body of trustees. Col. Joseph Jory the founder, was a native of Plymouth, and gave the town its largest mace.

The names are :

John Elyott, mayor, 13s. 4d.; Thomas Clowter, 6s. 8d.; Lucas Cocke, 5s.; Richard Hoop[er], 5s.; William Weks, 10s.; John Ilcombe, 10s.; John Derye, 5s.; Edward White, 5s.; Nicholas Bickford, 6s. 8d.; William Lake, 6s. 8d.; Nicholas Slannynge, 13s. 4d.; William Hawkyns, 8s.; John Ford, 6s. 8d.—The Twelve.

William Symons, 20s.; Robert Hampton, 16d.; Edward Cocke, 16d.; Thomas Byrt, 2s. 8d.; John Sampson, 6s. 8d.; John Hawkyns, 8s.; Thomas Hampton, 5s.; William Howe, sen., 1s.; Thomas Crowne, 4s.; John Maynard, 2s. 8d.; John Martyn, 5s.; Gregory Cocke, 2s. 8d.; John Waddon, 2s.; Thomas Perkyns, 2s. 8d.; Walter Pepperell, 2s. 8d.; Christopher Earle, 13s. 4d.; John Vosye, 3s. 4d.; Henry Brecnall, 2s.; William Brokinge, 16d.; Richard Enscotte, 4d.; Mr. Edmund Euston, 10s.—The Twenty-four.

Richard Lybbe, 10s.; George White, 3s. 4d.; Robert Holman, 1s.; George Bolton, 16d.; John Rewbye, 16d.; John Greninge, 5d.; John Lyght, 1s.; John Worgow, 2s.; John Lewys, 4s.; William Griffyn, of Compton, 2s.; Wm. Chiswyll, 4s.; Wm. Jeffrye, 16d.; Thomas Williams, 1s.; Wm. Griffyn, 1s.; John Whyte, 1s.; Wm. Makey, 8d.; Wm. Blake, fletcher, 16d.; Wm. Gill, 16d.; John Peny, 10d.; Roger Tremlynson, 8d.; Alse Lyle, 10d.; Robt. Wood, 20d.; John Bealbery, 2s.; Thos. Turner, 16d.; John Sannde, (?) 2s. 8d.; Nicholas Barford, 2s.; John Bery, 2s.; John Temycombe, 2s.; John Harvy, 16d.; Thos. Hoyle, 3s. 4d.; Thos. Barrett, 6s. 8d.; John Roche, 1s.; John Hoop[er], 20d.; Alse Pera, 3s. 4d.; Nicholas Browne, 5s.; Thomas Bickley, 5s.; William Brown, 10s.; John Genyns, 3s. 4d.; John Haylestone, 16d.; Wm. Huchins, 6s. 8d.; John Estcott, 3s. 4d.; Walter Battishill, 3s. 4d.; Bawdon Hooker, 2s.; John Burnard, 5s.; Richard Pers, 2s. 8d.; Jas. Hampton, 16d.; Henry Blase, 16d.; John Foote, 1s.; Wm. Battishill, 2s.; Margaret Bunting, 16d.

The earliest entry I can find in the Receivers' Accounts relating to the school is of this same date (1560-1), when, among other notices of work done on the school-house, thirty-six perches of wall are said to have been built, at 10d. a perch. "The school-house" and "the house in the churchyard" are also mentioned together in such a manner as seems to indicate contiguity. The accounts from 1549-50 to 1559-60 are, however, missing. After 1560-1 entries referring to the school are of frequent and at length regular occurrence. In 1564-5 Robert Woode has 30s. for the "scolems table," probably diet. In 1565-6 the school-master's fee is set down at £2 13s. 4d., while 10s. was spent on his table and bedstead; and in the same year the "little school-master" had 3s. 8d. In 1568 the "two" schoolmasters had £1 6s. 8d. for half a year's wages. These payments appear to have been made by way of supplement to the private subscriptions.

Upon this footing the school was maintained for several years, until an arrangement was effected with the Crown in respect of the vicarage, an interest in which had been acquired by the Corporation, partly by purchase from a Mr. Maslar. The advowson had belonged to the Priory of Plympton, and had been charged with a pension of £8, which came to the Crown on the dissolution of the Priory. This pension had fallen into arrear to the amount of £112; that is to say, it had not been paid from the accession of Elizabeth, for the arrangement entered into was declared by letters patent February 20th, in the fifteenth year of her reign (1572).

These letters set forth that the revenues of the vicarage, so burdened with the pension and the heavy arrears, were unable to maintain a vicar, since no one could be found to undertake the duties for the remaining portion of the value. Wherefore, on the undertaking of the Mayor and Commonalty, that they and their successors for ever should find a fit person to serve the cure, and should support a free grammar school in the town, paying unto the chief master a stipend of £20 per annum, the Queen granted and assigned to the said Mayor and Commonalty and their successors the arrears of the said pension, the pension itself, and the advowson of the vicarage. Beyond this we have the fact, that at the time when authority was given by letters patent and by Act of Parliament 17th Charles I. (not Charles II., as the Commissioners state in their report), for the division of the parish of St. Andrew and the erection of Charles Church, the advowson was again confirmed to the Mayor and Commonalty on the same condition, among others, of the maintenance of a free grammar school, and the allowance to the schoolmaster of the stipend of £20 per annum.

This salary of £20 a year was for the time a liberal one. It attracted hither William Kempe, an M.A. of Cambridge, a poet, and author of a work on education. It was the same amount that the Mayor was then allowed for his yearly fee, and it was certainly over a third of the whole revenues of the vicarage. Thus in 1592-3, when the vicarage was farmed by Kempe, he paid £40; while George Baron gave £10 for the rent of the vicarage house. Moreover, we have definite evidence of what was considered in those days the due division of the income of the living, in the fact that in 1600 Upham, the vicar, had £34 to Kempe's £20. And

Henry Wallis, who succeeded Upham, was bound under a penalty to pay the £20 every year. In the time of the Commonwealth the difference between the shares of the vicar and the schoolmaster had become greater; but then the Mayor and Commonalty made up the ministerial stipend to what was regarded as an adequate amount, out of the town revenues, and doubled the payment of the schoolmaster. The stipend, in fact, never represented the whole of the outlay on the school, as we see even from such entries as the payment of 14s. 8d., in 1592, to Kempe, towards building his study and trimming his chamber. Probably the Alms-house Chapel and its appurtenances continued to be the school-house and master's residence,¹ with sundry alterations, until, in 1657-8, the old school-house in the Orphans' Aid, in which so many Plymothians now living were educated, was erected at the cost of the Mayor and Commonalty, though subsequently rented from the other Charity, and in some way associated with the Alms-house property, which it adjoined, and which received a small annual payment from the Orphans' Aid on its behalf.

The Corporation at this time undertook indeed what was essentially the foundation of the Grammar School on an enlarged basis. Not only did they build the new school-house, but they resolved that in future the salary should be £40, with the Orphans' Aid house and garden; and that forty boys should be taught free, the master being allowed to make his own advantage for the rest. Upon this understanding, on the 8th July, 1658, articles of agreement were entered into with Nathaniel Conduit, of Ilminster, who became the first master in the new premises.

It is not my purpose to trace the history of the Grammar School in detail. It will be sufficient to say that in the last century it lost its free character altogether, and became simply a subsidized school of the ordinary classical type; though under the mastership of Dr. Bidlake, which ended in 1810, it attained a high and well-deserved reputation. On the appointment of Dr. Bidlake's successor, the salary, then £30, was raised to £50, on the condition that two sons of poor freemen of Plymouth should be educated therein free; and at the present time ten boys are educated on payment of two guineas per annum. The only other

¹ It and the dwelling attached were leased, in 1710, to William Strong, at a fine of £70, and on condition that £60 should be laid out in altering the premises.

change for notice is the removal from the old premises, which had become very inadequate for the purpose. A payment was then made in lieu of the school-house to the master; and this has been continued, the Corporation now paying £20 as salary, and £50 for the school-house. The fee farm rent of £8 granted to the town by Elizabeth, and once paid to the Prior, is now paid to the Corporation by the Rev. Dr. Wilkinson; so that the expenditure on the salary is only £12 on the part of the town.

It is hardly necessary to point out that the Grammar School is not fulfilling its original intention of providing free education for the sons of the inhabitants, or any fair proportion of them, and that the payments made by the Corporation are alike unworthy of the object in view and of such an important body. I shall be asked, Where is the money to come from? There need have been little difficulty on that head if the interests of the school had been properly regarded. Unquestionably when the school was founded at least a third of the revenues of the vicarage was set aside for its maintenance; and the £20 stipend was specified, not as a bare maximum, but as indicative of the *substantial* support that was to be given to the cause of education. Morally, at least a third of the tithe rent-charge of Plymouth belongs to the Grammar School now; and as that rent-charge approaches £1100, the Grammar School, if its rights had been strictly conserved, would have £400. Legally, it seems to me also open to question how far the Corporation, when they sold the advowsons of the vicarages under the Municipal Reform Act (after making a very handsome revenue of next presentations), were entitled to pocket the whole of the money as they did. That the Municipality should in this way pocket thousands of pounds, and give in return but one yearly twelve, was never what was intended between the first parties to the bargain; and if the advowsons themselves could not be charged with the liability (and it should be remembered that their purchasers paid for them upon the full current value), the Corporation should have made an equitable arrangement of their trust, and not have appropriated the "unearned increment" in so masterly a way.

Hele's Charity begins with a feoffment by Elize Hele, January 9th, 1632, of all his estates to his own use during life, and after his death to his wife Alice Hele, John Maynard, John Hele, and

Elize Stert, and their heirs in trust, to employ the same in some godly, pious, and charitable uses. They gave £500¹ and £20 a year about 1640 for the benefit of poor children in the Hospital of Poor's Portion; and in 1649 John Maynard and Elize Stert, the survivors, definitely applied the profits of certain of the lands for "the maintenance of poor children to be placed and educated in and preferred from the Hospital of Poor's Portion." Subsequently £2000 left by John Lanyon, under his will, September 15th, 1674, for the benefit of the poor people of the Hospital of Poor's Portion, was laid out in the purchase of properties in Plymouth, the rentals being applied in the maintenance and education of children, as with Hele's Charity, and the two being managed by the same set of trustees. Hence originated what is now known as Hele and Lanyon's School, but in the last century as the Red and Blue Boys—those brought up on the Hele Charity being dressed in blue, and those on the Lanyon in red. It was a purpose of the original scheme of the Hele Charity that children of "extraordinary parts of memory and otherwise" should if possible be sent to the universities. On other Hele foundations this has been done, but never in Plymouth.

To trace the history of this Hele and Lanyon Charity fully would require a paper to itself. Among all the endowed Charities of Plymouth not one has been so muddled, so wrested from its original intention. Hundreds, if not thousands, of pounds have from time to time been wasted in litigation and the solving of legal quibbles; while about £300 went early in the century by the insolvency of the then steward, Mr. Cleather, through whom various Charities of Plymouth lost over £1500. Much of the difficulty in the management of the Hele Charity has arisen from the fact that there are three sets of parties interested—the hereditary trustees, who are the heirs of Sir John Maynard; the official trustees, in whom the Lanyon property is also vested; and the Guardians; and at different times various schemes have been drawn up to settle points in dispute between them. In this way a Charity intended for the elevation of pauper children has been

¹ The £500 was to be invested in lands; and after payment of £10 each yearly to certain ministers, one child was to be maintained for each £8 of income—the Mayor and governors of the hospital appointing three, and the trustees the fourth. One year's income might be allotted to place each child out.

turned into a middle-class school, and the real owners deprived of their legitimate rights. Not a word can be said against the present educational management of the school; but, so far as I know, there is not a single boy there of the class for whom it was originally intended.

Take the deed of 1658, by which Sir John Maynard and Elize Stert settled the estates. The revenues were to be applied (among other matters) "towards the maintenance of poor children to be placed and educated in and preferred from the hospital in Plymouth, commonly called the Poor's Portion;" and none were to be admitted "but orphans who have no father, or whose fathers cannot maintain them;" while guarantee was to be given on behalf of outside places that children from them, if they became unfit for the hospital, should be maintained by the parishes to which they belonged. When the hospital passed to the Guardians under the Workhouse Act, the trustees dealt with the Hele Charity independently of the Guardians, and nominated the lads without reference to the workhouse until 1805, when the Guardians successfully maintained the rights of the children in the workhouse, and the trustees chose the two-thirds of the recipients who were under the deed of 1658 to belong to Plymouth, from a list presented to them annually by the master of the workhouse. Lanyon's Charity, which at first admitted girls, had precisely the same history.

In 1821 a formal agreement was entered into between the Guardians and the trustees to settle certain disputes which had arisen. In this the same principle was affirmed, but with certain limitations, which have really led to the present condition of affairs. The boys were placed under the care of the Guardians, and the schoolmaster nominated and paid by them in consideration of his educating the other male children in the hospital. "But the boys maintained and educated on this Charity" were "always to be kept as distinct as possible (both in and out of school) from the paupers in the house"—elsewhere called "the general poor."

While the old hospital was occupied as the workhouse Hele and Lanyon's School was conducted therein, originally as an integral part of the establishment, then as an adjunct, in separate apartments in the workhouse, which the Guardians were bound to provide. It has now its own house in the Tavistock Road; and the only connection between it and the workhouse under the latest scheme is, that the Governor of the Guardians has certain rights

of nomination, which are *not* exercised in favour of workhouse children, but in favour of lads who may or may not have a claim on the score of poverty, and whom it has been the custom to pass in at one door of the workhouse and out of another, to keep up the paltry pretence that they are preferred from the Hospital of Poor's Portion !

Joan Bennett's Trust was founded under her will, bearing date August 10th, 1650. She left certain premises in Plymouth (Old Church Lane) to the Mayor and Commonalty, to the intent that £6 of the yearly proceeds should be paid for the preaching of twelve sermons in the parish church of Maker, by Jasper Hicks, of Landrake, or whom he might appoint during his life (afterwards, her other executors had the appointment, and finally the Mayor and Commonalty); the residue to be paid quarterly to the poor of Maker. And certain other premises, in Southside Street, the profits of which were to be applied for the maintenance of two scholars in the study of divinity at Oxford or Cambridge, or one of them; one student to be of the posterity of her husband's brother's sons, and the other of the posterity of one of her sisters. Furthermore she left £30 to be lent out in sums of £10 for four years or less, gratis, to young tradesmen of Plymouth, well and piously affected; another £50 to be lent out in like manner for the same period, gratis, to "two able and religious ministers of the gospel;" and out of the profits of her properties in Plymouth, formerly the land of Pollard or his wife, £6 a year, for preaching a sermon monthly in the "Great Church" of Plymouth, every Saturday before the first Lord's-day, or before the celebration of the Lord's Supper, and during the term she had in the same property, by Mr. George Hughes, minister of Plymouth, or such as he should appoint—the residue of the profits to go to the increase of the maintenance of the two scholars; £20 was also left to be given to poor people of Plymouth—ancient men or poor widow women. Finally, after a number of personal bequests, Joan Bennett left the whole remainder of her property for the purchase of the freeholds of her leasehold interests, or of other lands, "to the end that the portions appointed by me for the maintenance of the said scholars and the lecture in the towne of Plymouth may be ppetuated and continue foreu^r if god shall see please." The executors were George Hughes, Jasper Hicks, Andrew

Trevill, and Christopher Ceely; and Hughes attended her on her death bed, March 10th, 1651 (1652), when he added a codicil by way of nuncupative will.

Mrs. Bennett was sister of Nicholas and William Hele; and Nicholas Bennett was her last husband. Her sisters were Agnes Evens and Elizabeth Parker, and Andrew and Stephen Trevill were her cousins. That Mrs. Bennett was a Puritan her will proves; but while a Puritan she was no ascetic. Her bequests include two diamond rings, other rings, pearl and coral bracelets, a broad Spanish piece of plate, two beare bowls, and all the effects of a well-plenished house, while her husband had a "beaten gold" hatband.

Christopher Ceely eventually handed over the will and deeds of the properties to Andrew Trevill, the last surviving executor; and Trevill's son-in-law, Dr. Burthogg, on his death, to the Corporation, who held them in 1676.

There is no trace to be found of the moneys bequeathed by Joan Bennett to be lent on loan, nor of the bequest for the endowment of the sermon in Plymouth. The Maker Trust continues; but had long ceased to be, if it ever was, under the management of the Mayor and Commonalty of Plymouth, at the date of the Charity enquiry of 1820; and the only interest these matters have to us therefore is the proof they afford that the testatrix was a Presbyterian, and that her endowment was not intended for the education of Episcopalian clergymen, to which it has been at times applied. It is possible, as the Charity Commissioners suggest, that the payment of £6 for the sermon may have lapsed in consequence of the lands on which it was charged not being freehold; but that will not account for the disappearance of the £80 stock for loan; nor does the way in which what remains was treated inspire much confidence in the trusteeship of the Mayor and Commonalty.

According to their own showing to the Charity Commissioners of 1820, from 1678 to 1795 the Corporation had received in rents £2174 18s. 7d., against which they had only paid exhibitions to the amount of £732. In that year the house was burnt; and they allowed £500 to the tenant toward rebuilding (it is always easy to be liberal with other people's money). £500, or over £4 a year, was also claimed by them as deduction for rates, taxes, repairs, and expenses of receiving the rents, while they allowed nothing on the

other side for the interest of the constantly-accumulating balance, which would have paid very handsomely for all these expenses. However, in 1799, they did acknowledge a debt to the Trust of £442 18s. 7d.; and we may be thankful that they disorged even so much. From that date down to the time of the enquiry of 1820, the Corporation continued to receive and use the rents; but they made no application of the funds because no persons had been able to prove their descent under the will; and possibly, if the Commissioners had never investigated the business, nothing more would ever have been heard of Joan Bennett and her gift to the poor scholars of Plymouth. A few years later there was a Chancery suit; and in 1834 it was ordered that failing claimants of descent the sons of inhabitant householders should be chosen. The bulk of the Charity property now consists of accumulation of income.

ORPHANS' AID.

The real founder of the Hospital of Orphans' Aid had been forgotten, apparently for centuries, until I disinterred his will among the archives of the Corporation. His name was William Laurence, and he was a merchant, living at Foxhole. His will was made December 3rd, 1612; and its opening words show that he was one of the old-fashioned Puritans within whose ranks all that was worthy in Plymouth at this time was to be found. He commends "my soule to god in Crist, the onelye fountine and originall cause of life and saluation to me and all true beleivers." And then he bequeaths to Thomas and Nicholas Sherwill, merchants, £100, to be paid at the return "of the good shippe called the Jonathan of plymouth whereof I am part owner from her now intended vioage to the Straights in the parts beyond the seas, and of the proceeds and returne of my goods and adventure now in the said shipp the said voyage," the condition being that within seven years after the testator's death the Sherwills should erect and build a "convenient Almshouse" in Plymouth for "poore people . . . to dwell and inhabite therein or for the education and bringing vp of poore children or orphants of the same borough." Further he bequeathed to the Mayor and Commonalty "to the use and for and towards the releife and mayntenance of the said poore people and orphants which shall from time to time dwell or be brovght vpp in the saide howse," or in default of the Sherwills erecting such a house then

to the same purpose in any such house erected by other persons within the said seven years, four pounds annually out of his lands and tenements at Tor for ever.¹ Another 20s. a year was left to the Mayor and Commonalty out of Tor towards the maintenance of a "preacher of the Word" at Tidneham, Gloucester; and £20 to the "stocke to sett y^e poor to worke."

We learn from the will that the testator was a man of means. He dwelt in a leased house at Foxhole, now vulgarised into Vauxhall, which he left to his wife Margaret Laurence, and after her to William Laurence his nephew, son of John Laurence. Tor, which he had bought of Christopher Gaye, he left to his wife for life, then to his brother Henry Laurence for his life, and finally to William Laurence and his heirs. Hundiscombe he held under lease from Henry Laurence, and this, with two houses at the Church Stile, he left to Nicholas Sherwill, on his paying £100 to the widow. To Henry Laurence he left the corn standing at Hundiscombe, and his quarter part of the "God speede." His brother Richard lived in a house at Briton Side, leased to the testator by John Amadas; and to Richard he left the lease of this messuage, with "pallace, mast house, masts, dial-boards," &c. The other details of the will do not concern us here.

The Sherwills were faithful to their trust; and well within the seven years the work was done. A memorandum made upon a loose piece of paper, which has fortunately been preserved, places the cost of endowing and incorporating at £301 9s. 5d.; and of building and walling and planting the orchard at £457 13s. 4d., total £759 2s. 9d. William Laurence's £100 had thus borne good fruit. A memorandum on another loose scrap of paper shows that it had been supplemented up to July, 1616, by the following gifts: Abraham Colmer (Mayor 1615-16, 1627-28), £100; John Clement (Mayor 1614-15), £120; Nicholas Sherwill (Mayor 1618-19, 1628-29, 1637-38), £120; Thomas Sherwill (Mayor 1608-9, 1617-18, 1626-27), £120; Humphry Fownes (Mayor 1588-89, 1596-97), £50; — Proctor (a legacy), £20; John Bound (Mayor 1621-22, 1630-31), £10; W. Heale (Mayor 1629-30, 1638-39), £10; W. Hill, £20; William Birch (Mayor 1640-41), £10. Laurence's £100 was received from Clement, who married his widow.

¹ This is the estate of Nether Torr or Oaten Arishes, now forming Sir John Gayer's Charity, and still charged with the annuity.

There is extant the detailed account of the building charges kept by Thomas Sherwill, beginning March 7th, 1615, on which day Mr. Robert Trelawny had £18 10s. towards the redeeming of Mr. Mathew's lease, "being the on halfe of the pryse thereof," and ending August 28th, 1618. In this account there are some entries of small gifts from poor people, such as shillings from lightermen and the like; and Mr. Robert Trelawny (Mayor 1607-8, 1616-17, 1627-28) appears as a liberal benefactor in addition to those already named, giving a house occupied by one Robert Bray, bringing in £2 8s. annually. He also seems to have taken half the cost of Mr. Mathew's lease; and pays £6 13s. 4d., with £10 16s. 1d. for the "remayner of the poole" (that is, of the dues of Sutton Pool). A precedent was sought for the deed of incorporation, and a copy of that of Dr. White's Temple Hospital in Bristol obtained. Mr. Glandville's man had 11s. for writing and engrossing, and Sir Matthew Cary 2s. 4d. for his fee; while the enrolment cost 6s. £100 was paid to Mr. Fownes in 1618 for a house in Stillman Street, and £25 to Mr. Colmer for his gardens in Mudd Street—Buckwell Lane.¹

The actual site of the Hospital was the tenement leased by Matthews, granted by the Corporation for the purpose, and in consideration of the "cost and great charge" of the Sherwells in acquiring the lease, at a yearly rent of 22s. Land of Dabernoun's Chantry adjoined it on the south; and may have been the occasion of Dr. Aaron Wilson's subsequent fruitless complaint that the town had built a Hospital where the Vicar had anciently a house. Other lands of this Chantry were in Old Town and near Tothill. The founder was Thomas Dabernoun. A John Dabernoun was one of the servants of the Black Prince, steward of Lydford, keeper of the fees of the Prince as Duke of Cornwall, and lessee, in the reign of Edward III., of the Water and Pool of Sutton.

An account with Abraham Colmer, Robert Trelawny, Thomas Sherwill, and Nicholas Sherwill, governors, states the expense of "building erecting founding & incorporating the sayd Hospital wth the dyet apparell & other necessities of the orphans" to December 24th, 1620, at £833 7s. 5d., of which up to the 29th

¹ On the parchment back of the book are the mottoes: "Ni deus domum ædificat frustra laborant ædificatores;" and, "He is a father of the fatherlesse & a Judge of widdowes euen god in his holy habitation."

September preceding the founders and first benefactors had given £734 Os. 1½d., so that £99 6s. 3½d. remained due.

The property conveyed under the foundation deed consisted of (1) three messuages and a close adjoining the Hospital on the west; (2) two gardens in Mudd Street; (3) a house in Stillman Street; and (4) two houses in Southside, with a close of land at Laira,¹ and two closes in Egg Buckland, called Awter's Well (or Will)—all these latter being the property of Arthur Pollard, Esq., deceased. The question naturally suggests itself whether this property, once Pollard's, was not itself a special endowment.

In the following year there are entries of receipt, which set forth the details and values of the original endowment, as follows: House in Stillman Street, £5; tenement at Southside, 16s.; two messuages lately built by Joseph Gubbes at Southside, piece of ground at the Lary, and 16 acres of land at Egbuckland called Auterswell, £1 13s. 8d.; shop at Southside Quay, 4s.; three messuages and gardens adjoining the hospital on the west, and a close in Old Mill Lane, 6s. 8d.; part of a dwelling-house and shop, 48s.; building on the wall of the town, 4s.; two gardens in Mudd Street, 25s.; dues of Sutton Pool, collected by John Barnes (£13 6s. 8d. was paid the Prince for rent), £22 3s. 7d. The total receipts, with a legacy of £10 from John Waddon,² were £43 15s. 11d.; the expenditure, £33 16s. 2d. "Richard Isteed phisition" was tutor, and had £11 14s. for the diet of four orphans for three-fourths of a year.

There is not here, nor anywhere else that I know of, save in the Receiver's Accounts for 1602-3, any definite reference to a gift by Walter Mathewe to the town of certain houses for the use of poor fatherless children, a pair of indentures concerning which were written in that year at the cost of 5s.

This is the Walter Mathewe who was Mayor in 1604-5, who built the conduit in Briton Side at his own cost, and who is said by Yonge to have been servant to Sir Richard Hawkins, as his wife had been to Dame Hawkins. According to the story, the two ladies quarrelled for precedence, and the knight's wife gave

¹ This was a landscore containing 133 yards, at 36 feet a yard. Awter's Will was let on a life lease, and the fine paid by Robert Berry for a reversion at the end of the century was 37s., the rent being 10s.

² He also left £10 to the "poor stock" of Plymouth, and £5 to the poor people of Plymouth.

the mayoress a box on the ear. "It made great disturbance, at length it was composed, and s^r *Rich^d* gave y^e town a house, somewhere in y^e market street for satisfaction." How far this is true one can hardly venture to say ; but it is a fact that two houses in Market Street, or Whimble Street, formed part of the endowment of the Poor's Portion.

Mathewe's gift may seem to have had some connection with the lease of the site already noticed, but it is clear on consideration that it had not ; and there is little doubt that it is included among the properties already named. The Corporation seem to have concentrated divers gifts and bequests applicable to a common purpose. We have direct evidence that this was so with the Poor's Portion.

Robert Rawlyn (Mayor 1620-21, a captain in Parker's last expedition), whose will is dated February 15th, 1626, was a liberal benefactor to the town generally, but to the orphans in particular. He left £10 to the poor ; £10 to the poor stock ; £125 to be lent to poor seafaring men in sums of £10 and £5, at 4 per cent. ; and £125 to be lent to poor tradesmen and young beginners. Two houses in Batter Street and the residue of his property was bequeathed to the "Orffantes Ayd," with the expression of a wish that one of the children therein should belong to Compton Gifford. Of the interest of the first £125, £3 was to be spent in providing butter for the Almshouse people on fast-days ; £2 was to be paid for the poor of the tithing of Compton Gifford. Of the interest of the other £125, 10s. each were to be paid to the poor of Plymouth, Stonehouse, St. Budeaux, Stoke, Egg Buckland, Western Peverell, and Saltash ; and the remaining 30s. at Christmas to the poor of Plymouth.

That the remainder given to the Orphans' Aid was a substantial amount is shown in his recognition by the "twelve and twenty-four," in 1647, as the chief *founder* of that Charity, of which he was certainly the chief supporter. The greater part of his gift had been applied in the purchase of the moiety of the Drake lease of the mills, which then produced £150 a year ; and the Mayor and Commonalty at this date resolved that only eight orphans should be maintained out of the mill income ; and that as much money should be saved as possible, "to raise some considerable sum for the future support of that house, and keepe in memory

the acte of soe good a benefactor." The Commissioners of 1820 had an idea that the £250 loan stock had never been received by the Corporation, inasmuch as all the payments thereout are, and have long been, made from the funds of the Charity (save the 30s. to the poor of Plymouth, which has dropped). The real explanation, however, seems to be that all Rawlyn's bequest was applied directly in furthering the objects of the Hospital. The Corporation still pay, and have long paid, £20 a year to its funds.

The necessities of the Corporation, brought about by the siege, caused them to borrow freely of the funds of the Charities in the town, as well as of individuals. There is the fullest evidence, however, that a strict account was kept. The Orphans' Aid seems to have been the most wealthy body, and to have been the most largely drawn upon. The £1500 paid for the moiety of the Drake lease of the mills, during the siege of course produced practically no return to the hospital; and when the lease ran out the Corporation had become largely in debt to the Charity. £1400 of this debt was, however, cancelled in 1653 by the settlement on the Hospital of a fourth of the mills (then fallen in hand) and of the water in the leat; and this arrangement lasted down until 1805, when the fourth was repurchased by the Corporation for £1800. This led, in 1840, to the Charity Commissioners filing a bill against the Corporation to recover the property; but in 1845 the Master of the Rolls decided that the Charity had no legal claim. The produce of the mills to the Charity from 1666 to 1803 averaged £60 5s. 7d. The highest year was 1712 = £107 2s. 1d.; while in some years, as in 1766, it yielded nothing.

It would be tedious to attempt to follow the fluctuations of the Corporation debt to the Orphans' Aid. In 1660, including three years' port dues, at an average of something over £20 a year, it was £566 7s. 11½d.; but of this £300 was allowed for the lease of the New [Grammar] School, on which the Charity received as rent £15. In 1685, however, the debt is set at £1393 14s. 6d., exclusive of the Mill accounts.¹

The Orphans' Aid may be regarded as in its character strictly a Corporation foundation. Though founded by deed poll July 17th, 1617, by Thomas and Nicholas Sherwill, the site had been granted them April 14th, 1615, subject to the fee farm rent of £1 2s.,

¹ About 1650 the revenues of the Charity were: Mill rent, £160; yearly revenues, £44; Mr. Edgcombe's annuity, £10; Sutton Pool, £6. Total, £220.

by the Mayor and Commonalty; and the Sherwills by their foundation deeds provided that the Hospital should be under Municipal management. The ex-Mayor was to be governor, four of the aldermen assistants, and two of the "twenty-four" wardens; and the Mayor and his brethren, from the time that there should not be three of the first founders or benefactors surviving, were to have the sole direction and visiting of the Charity, and the placing and displacing of the orphans. For this reason, though they had ample reason given them not to take anything for granted, the Commissioners of 1820 made no investigation of the affairs of the Hospital. It is now under the control of the trustees of the Municipal Charities.

Though appropriated solely to boys, the original intention seems to have been to include girls within its benefits. At any rate the seal, the draught of which cost 1s. 6d., shows five orphans, of whom *three* are females.

HOSPITAL OF POOR'S PORTION.

In May, 1589, John Berry, of Plymouth, left (1) a house to one Thomasine Collyn for life, charged with 6s. per annum to the relief of the poor; (2) lands and tenements which he had bought of Mr. Foster "near Plymouth Church" to his kinsman, William Berry, of Bideford, Jane his wife, and their heirs; failing such heirs, in succession to Mark Berry, Thomas Berry, and Roger Berry, and their heirs male; and failing either of these, the reversion to the Mayor and Commonalty for the maintenance and relief of the poor for ever—this land was also charged while it continued in the Berrys with a second annuity of 6s. for the relief of the poor; (3) lands and tenements at the Southside which he had bought of John Amadas and Edmund Specott, in succession to Marke, William, Thomas, and Roger Berry and their heirs male (likewise charged with an annuity of 6s. for the relief of the poor), and the reversion as before to the Mayor and Commonalty for the maintenance and relief of the poor for ever.¹

¹ Among other bequests were 20s. each to the "poore men's boxe of Plymouth and Tamerton;" 4d. each to every occupant of the Almshouse and the Maudlein; sundry pieces of white tin; a mazer cup "of silver" to Thomas Collin; his best gown to Peter Anthonie, goldsmith, and his second best to Thomas Piers; 10s. to Mr. Gill, curate of Plymouth; 5s. to the preacher of his funeral sermon; and 2s. each to his godchildren.

By this will John Berry virtually became a principal founder of the Hospital of Poor's Portion.

Neither Mark nor William Berry had any male issue; Roger Berry died without issue; Thomas Berry had one son and two daughters. This son, Thomas Berry the younger, also died without issue, but left the property at the Southside to his wife and her heirs, considering himself the owner in fee-simple. Then the Mayor and Commonalty stepped in and claimed the reversionary rights; and the property was leased in 1626 by the widow, Elizabeth Berry, to Robert Trelawny and others for the use of the poor on payment of £70. Disputes arose with the daughters of Thomas Berry the elder, but the Mayor and Commonalty sustained their right; and this property (both 1 and 3; for the house left to Collyn for life was also at the Southside) became a portion of the endowment of the Hospital of the Poor's Portion, the annuities merging.

Concerning 2 we have less definite evidence. Its descent was not limited to heirs male in the case of William Berry, and it would seem that he did have daughters, in which case the reversion might not have accrued. He died about 1607. At the same time we have in that case to account for the disappearance of the third annuity of 6s. As the property was near the Church, the idea naturally suggests itself that it may very well have formed part of the original site of the Hospital, especially as the Hospital was not built until after the other Berry property had been acquired by the Mayor and Commonalty. That it did fall into the hands of the Corporation seems proven by the entry in 1637 of the allowance to John Clement and William Beele of four years' arrears of Berry's land "by the church."

Here, however, we have to bear in mind that when the Hospital was built the Mayor and Commonalty claimed that it had been erected on their land—three tenements, the annual rental of which was £2 8s.,¹ and, what is somewhat strange, that they in effect had payment for it. There is a curious order in the White Book, which sets forth that the three messuages and tenements on the site of which the Hospital had been erected were worth twenty marks a year in clear annual value. And whereas this was so, and whereas also the Corporation were possessed of three closes of land containing about six acres, then in the occupation of Philip

¹ A tenement next the churchyard conveyed to the Poor's Portion, was in 1609 in the occupation of Daniel Northerell, clerk.

Andrews and Robert Barker, which three closes were charged with the payment of £2 6s. 8d. yearly to the poor, it was agreed that this yearly payment should lapse to the Corporation in exchange for the Hospital site; and that if at any time the Court of Chancery, or such competent authority, should insist upon the payment of this rent-charge, the wardens of the Hospital should pay the Corporation £200. These three closes were in the possession of the Corporation, so charged, as early at least as 1612. Two of these, adjoining the Mill Pool, were in the occupation of Wm. Parker; one in that of Sir Warwick Hele.

Other properties belonging to the poor in that year, and subsequently in part transferred to the Hospital as portion of its endowment, were a tenement in High Street, and a piece of land on Crosse Downe (clearly the Moore Splatt, of which more hereafter), in the occupation of Richard Hitchins, at a rent of 38s.; a tenement in Market Street, and a garden in High Street, rented by Wm. Pinsent, at 15s. (also transferred), and late White's tenement in Old Town, rented by John Waddon, at 6s. 8d. Three rent-charges of 6s. each were then paid on the Berry property; and the total rental receipt was £6 4s. 4d.

There is, then, ample evidence that early in the seventeenth century there were in the hands of the Corporation of Plymouth various properties and rent-charges belonging to the poor of the town, which they sought to make available in various ways. Moreover, the extant poor accounts, which commence in the year 1611, show that the poor funds were being continually increased by small legacies, which if they had only been treated as capital instead of revenue would have accumulated to a handsome sum. It was almost a habit of the good people of Plymouth to remember the poor in their last wills and testaments, by small bequests, even if the amount was only 5s., though the average would be nearer £5. As many as half a dozen of these legacies occur in single years; but save when specified to be spent in certain special ways they must have operated to the relief of the ratepayer, and not to that of the poor, as in the case with several endowments in Plymouth now.

One of the chief directions in which our Elizabethan ancestors sought to be really charitable was that of "setting the poore on worke"—finding employment for them if they could not find it for themselves; and it was out of an effort of this kind that the

Hospital of Poor's Portion developed. So early at any rate as 1597, we find the Corporation moving in this direction.

There is extant a copy of a petition by one William Woulfe, serge weaver, to the king, dated 1606, in which he complains that the Mayor and Aldermen of Plymouth had induced him nine years previously to come to that town from Exeter, for the purpose of instructing twenty poor children in the art of spinning worsted. His statement was that he was promised £50 for the first year, and £100 for the next, "which some of a hundred pounds they then also promised to lend unto him for seven yeares then after the effecting the premises, and likewise promised him they would from tyme to tyme duringe the said terme at their costes and charges after the first yeare mayntayne the said 20 poore children with meat drinke and apparell; and likewise that he should have out of every shipp that belonged to the same which came from the Newfoundland 100 of fishe, and a house rent free." The rejoinder of the Mayor and Aldermen was that Woulfe was a wasteful and untruthful person, and his charges "most false." Mr. Foynes had agreed to lend him £30 and no more [Foynes or Fownes was Mayor when the agreement was made], and the town to provide the children with apparel, and to give him 1s. a week for the diet of every child "whom he should sett at work and instruct in his science." Woulfe had wasted his £30 and was no longer able to put the children to work for want of credit.

In 1611 we find entries of children being placed with William Weeks to be trained in a similar way. And then we are carried a step further, by a curious memorandum in one of the old Corporate Apprenticeship Books, apparently in the handwriting of Matthew Boyes, the town clerk, which records what appears to have been the first attempt to establish a workhouse, in the old castle.

In the name of god, the 28th of September an^o 1610. A note of provisio^{ns} delivred into y^e Castle for the pore to thende they maye be there placed and sett on work w^{ch} is but abeginninge for a fewe and for a tryall thereof the w^{ch} I praie god continewe and augment to his glorie & theire comfort

Imprimis	2 bedsteads
	2 new Large Canvas sheets
	2 paire of newe blankets
	2 Canvas bouldsters
	2 whyte rougs
	5 turnes 2 paire of wollen cards
	5 spilles and 5 wharvars (?) strings.

In subsequent years we find that the work consisted chiefly of picking oakum, spinning worsted stockings, and weaving.

Such was the way in which the Mayor and Commonalty led up to the establishment, in 1630, of the Hospital of the Poor's Portion; the foundation deed of which, executed by Sir John Gayer, Abraham Colmer, and Edmund Fowell, in performance of the trust reposed in them by the then Corporation, is dated May 4th of that year. The Hospital stood, as most Plymothians will recollect, in Catherine Lane, immediately to the south of the Orphans' Aid, and bore over the entrance gateway the pious motto, "By God's helpe throvgh the Christ." The regulations concerning the provision for religious teaching and exercises were very particular and strict. The management of the Hospital was vested in the Mayor and Magistrates (or Aldermen) and Common Council.

As in the case of the Orphans' Aid the necessities of the Corporation during the early part of the seventeenth century led them to borrow from the funds of the Poor's Portion, and the debt was dealt with in much the same fashion.

Thus in 1658 an annuity of £30 out of the shambles for ever was settled on the Hospital, in consideration of £600. But the dealings with the Poor's funds were never so extensive as those with the Orphans'; and the only money owing to this Hospital by the Corporation in 1685 was £129 17s. 3d., besides £100, the bequest of John Lanyon; and certain arrears of the rent charge of £30. The rent charge is still paid, though the old shambles have long disappeared, only it goes to Hele's Charity, and not to the Poor's Portion, the £600 purchase-money being a part of the funds arising from the Hele gift.

The Hospital ceased to be a private Charity in 1708, when the already-cited act of Parliament was passed creating the existing Corporation of Guardians, and transferring to them the Poor's Portion, with all the charitable trusts and gifts "given, devised, or disposed in general terms for the use of the poor of the town, or of either of the parishes of St. Andrew and Charles." This act also provided that the names of all benefactors to the Workhouse shall be inscribed in "capital golden letters" for ever in the chief room; and that a moiety of the accumulated funds from fines, and of all future fines of the Hele estate, should be paid over to the Guardians.

When the Poor's Portion was founded it was endowed with the Hospital Building; five messuages at the Southside—the Berry bequest; a messuage in Market Street (Whimple Street); a garden in High Street; other premises in Whimple Street; the "Moore Splatt" north of Crosse Downe; and two messuages between the Hospital of Poor's Portion and the Hospital of Orphans' Aid.

Of these a portion only now remain. The Hospital and adjoining premises were sold, and their sites form part of that of the Guildhall. The "Moore Splatt" was utilized as a site for the erection of the New Workhouse. All that is left of the five tenements at the Southside now forms the site of Messrs. King and Pinkham's warehouse in New Street. The remainder was sold to the Commissioners of Improvement in 1853 for £400. The Commissioners likewise bought the first house named in Market Street in 1835. It was at the corner of Whimple and Buckwell Streets, and the price paid for the fee was £350. The garden in High Street has long ceased to be part of the Corporate estate. It forms the site of the house now occupied by Mr. Colwill, the grocer, at the corner of Catte Street—in whole or in part; and so early as 1641 Mr. Philip Francis (Mayor 1642-43, 1651-52) is said to have built a house thereon. Francis by his will, dated August 6th, 1658, left an annuity of 40s. a year out of his house in "Foxhole," and this may represent the garden rental. Moreover, Francis left all his lands of inheritance not otherwise disposed of, after failure of his right heirs, to the Mayor and Commonalty, for the use of the poor of the parishes of St. Andrew and Charles equally. The will was proved in 1668; but the poor have never been anything the better for this reversion. The remaining item of the original endowment is now represented by the Guildhall Wine Vaults in Whimple Street. I say represented, because originally it extended from Market or Whimple Street to Higher Lane, but had ceased to do so as far back as a lease to Thomas Redding in 1673; and it is probable that it has been further limited since. The portion next Higher Lane was made the subject of a distinct lease, to one Thomas Durant, something before this date.

Other endowments in the hands of the Guardians include:

A house in North Street, occupying the site of three tenements which were mentioned among the lands of the Hospital in 1641

and had been leased by Nicholas Sherwill to John Young in 1633. There is no trace of the manner in which it came to the Guardians.

A house in Looe Street, purchased, with two small houses communicating at the rear, by the Guardians of one John Roberts, of Plymouth, tallow chandler, in 1722. The two houses in Batter Street were, by the operation of the life leasehold system, allowed to get so disgracefully into decay, that they were eventually pulled down by the Town Council as ruinous, and the sites thrown into the street, shortly after 1854.

An annuity of 40s., under the will of Philip Francis, charged on a house in Vauxhall Street, and paid in equal instalments by Mr. Bellamy and Mr. Treeby.

An annuity of 10s., paid by Messrs. Sparrow and Co. out of Fairpath Field, Cattedown. This represents a gift by one Richard Raddon, presumably the same Richard Raddon who, about 1589, built two houses on Friary Green, and obtained a lease from John Sparke. Nothing, however, is really known of the origin of this charge, which seems to have passed from the Mayor and Commonalty to the Guardians under the Act of Incorporation. In 1828 it was reckoned at 20s., two years in arrear, and charged upon three fields. Mrs. Julian, the owner of one part of the fields, was willing to pay her share; Mr. Langmead, the owner of the other part, refused to pay his, unless the Guardians could show their title. However, so late as 1850 the 20s. was paid—15s. by "Peter Symons, of Stonehouse, out of Stone Park and Little Foxes, Cattedown," and 5s. "Sir R. Lopes, remaining part of 20s. late Julian." Half of this Charity has therefore been lost since the latter date.

Margery Row, by will October 1st, 1666, left the estate of Bridgmoor, St. John's, to the Mayor and Commonalty of Plymouth, for the distribution by the overseers of the poor of 2s. in bread on Friday in every week, the residue to go to the increase of the stock for the use and maintenance of the poor of the borough for ever. It is probable that a portion of this property has been lost.

William Rowe (merchant), by his will April 16th, 1690, left Shute Park, consisting of 3 acres 3 roods and 27 perches, under trust for the distribution of the rents and profits in clothing yearly within ten days after the 25th of December. The rest of his property was devised to such charitable uses as his trustees and their heirs should approve. The Guardians, beyond the field, only obtained £100, the money and the land being handed over by John Crabb, trustee, in December, 1713; but it was not until 1816 that the directions of the testator were followed, the rents and profits up to that time being carried to the general fund of the workhouse—to the relief, of course, of the ratepayers. This property should be most valuable, but has been badly managed. The original site of the Free School was alienated for 500 years at a rental of £10 a year, and in 1824 the rest of the available building land was let on lease for ninety-nine years for the erection of the cottage dwellings in Rowe and Glanville Streets; so that the annual produce of what was once four acres of land in a prominent locality in Plymouth is at the present moment only £51 9s. 5d. Some of the property appears to have been lost. The residue of the personal property of the testator beyond the £100 was invested in Consols. One of the objects specified by him for its application was the education and preferment of poor children, and part of the interest of this capital amount (now £841) is paid to the Free School.

Joseph Palmer, by his will September 12th, 1723, gave an annuity of 40s., to be distributed annually to the poor of both parishes for ever at 12d. per head.

Joseph Maddock, in 1727, bequeathed £1500 to the poor of Plymouth, to be laid out in lands of inheritance, and the proceeds applied in the yearly distribution of clothing on November 1st, one-half to poor in receipt of relief, and one-half to the poor not in receipt of relief. January 7th, 1729, £1475 was laid out in the purchase of £1400 South Sea Stock until suitable lands could be procured. As it remains so invested, the inference is that for the past 150 years no suitable property has come into the market! The produce of this £1500 is at present only £36 18s.

Sarah Webber, by her will October 24th, 1778, left 30, Bilbury

Street, subject to a life annuity to Paul and Mary Chabot of 40s. a year, to the Guardians, for the benefit of the poor of the parish of St. Andrew.

The whole of these Charities are treated as part of the common fund in relief of the poor-rates, with the exception of William Rowe's and Maddock's, which are laid out in clothing; and 2s. a week out of the Bridgemoor rents, spent in bread.

GENERAL CHARITIES.

In 1584 John White, citizen and haberdasher of London (a member of a Plymouth family of note), made the Mayor and Commonalty his trustees in respect of the sum of £250, which was to be employed in making loans for five years at 5 per cent. interest (half the current rate) to merchants between twenty-one and forty-one years of age. Of the interest, £3 each was to be paid annually to the Mayor and Burgesses of Liskeard, Truro, and Lostwithiel; and to be applied in weekly gifts of bread to twelve poor people in each of these towns. The parson of each place was to have 16d. for his pains in distributing the bread every Sunday in his church, and 6s. 8d. was to be paid to a preacher for preaching a sermon in the same parish church on or about the first Sunday in November. The balance accrued to Plymouth.

This was the same John White who gave the Corporation their most ancient piece of plate—the “Union” loving-cup, which bears the inscription: “The gyft of John Whit of London, Haberdasher, to the Mayor of Plymouth and his brethren for euer, to drink crosse one to y^e other at their Feastes and Meetinges. Dated y^e 5th of June, 1585.” It is entered in the Black Book as “a cuppe of sylver doble gilte worthe 13^{li} 6^s 8^d.”

How long the loans may have been kept up it is difficult to say; but the Corporation had certainly learnt to borrow the money themselves by October 12th, 1664, when it was ordered that £50, the residue of the legacy in hand, should be applied in defending the rights of the Commonalty to Sutton Pool. They admitted the liability in 1685, when £40 was out on loan, and they had £210 in hand for want of borrowers. The payment by the Corporation under this head is £11 15s. annually.

An entry in an Apprenticeship Book—undated, but probably early in the seventeenth century—supplies a list of the monies given to the poor of Plymouth from 1595.

Sir Francis Drake (Mayor 1581-2, Member 1593) had left £10 to the poor; £20 to the poor people of the Almshouse, to be paid in equal instalments over three years; and another £10 to be distributed at the discretion of the Mayor—£40 in all.

Martyn White left £20.

Walter Peperell (Mayor 1575-6, 1590-1) gave £10, to be yearly paid.

John Rewbie left £10.

Mr. Baron (Mayor 1594-5) 20s. annuity, to be charged on his lands for ever.

John Scoble, merchant, in 1591 gave £10, to be converted for the provision of [fire?]wood for the poor, yearly to be employed.

Anthony Goddard left an amount not specified.

John Phillips, merchant (Mayor 1593-4), gave £5.

Sir John Trelawny (Mayor 1597-8, 1611-12) left £15.

Thomas Middleton, merchant, of London, afterwards Sir Thomas, gave £20 to be converted for the provision of [fire?]wood for the poor, yearly to be employed. The Receivers' Accounts say he paid £20 for certain godly uses in 1590-91; and according to a bond entered into by the Mayor and Commonalty, the £20 advanced by Middleton was given in trust for the redemption of articles pawned by people too poor to redeem the same, and for the extension of the terms for which money had been lent thereon.

This list does not include a legacy of £50, and an annuity of £10, left under the will of Sir John Hawkins (member 1571-72) at his death in 1595. £4 15s. was paid to Matthew Boyes, the Town Clerk, in 1598-99, for "making and seeking" this bequest; but I have not been able to trace its payment. The £50 might easily escape notice, as it would not, unless attended by exceptional circumstances, be carried into the general accounts; but it is not easy to see how all mention of the annuity should fail, if it was received. On the other hand the memorial verses placed near the cenotaph of Hawkins, in St. Dunstan's in the East, by his widow, speak of the poor of Plymouth as benefited by his "great and gracious legacy." As she puts it, they

"Have had, now have, and shall have
Many a crown."

Sir Richard Hawkins, Sir John's son, was at his father's death, and for several years after, a prisoner in Spain (until the end of 1602).

This may have caused some delay ; and as there does not seem to have been any such feeling on the part of the town as would result from the withholding of such a bequest, but on the contrary the Hawkinses continued to be held in honour, it seems probable that payment was made by the settling of some of the property devoted to charitable uses otherwise unaccounted for. Moreover, in 1637 the Corporation bought the manor of Sutton Vawter of John Hawkins.

Revel's Gift, otherwise the Underwood Charity, consisted of a rent-charge of 13s. 4d. on Tierney's field, of which 9s. 4d. went to Plymouth, and 4s. to Plympton. In 1762 this field was called Dunstone Hill, and was in two ownerships. The total area was two acres forty-three perches. In 1819 it was said to be held by a Mr. Kingdon, under the Mayor and Commonalty ; and the Charity was stated in a return of 1786 to be the gift of John Revel. Whether this be so or not there is an odd entry in the earliest extant Poor Accounts of 1612, repeated in subsequent years, that Wm. Reve, of Plympton Mary, had the use of 40s. given by John Revel, whose will was that William Reve should have the same. Reve did not, however, pay anything for interest, and John Revel's name does not otherwise appear ; nor can any payment in respect of his legacy have been included in the rents.

Again we find that in the early part of the seventeenth century, the Corporation had a messuage, tenement, and garden, with two pieces of land and appurtenances, at Underwood. And Dorothy Revel, October 4th, 1661, left the Mayor and Commonalty £20 to be lent out at interest, and the proceeds to be given to poor widows who had been formerly housekeepers, and who were not inmates of the Almshouses, on the first of January in each year for ever.

William Hils, Plymouth, merchant, July 30th, 15 James I. (1618), left to the Mayor and Commonalty an annuity of 52s. out of two messuages adjoining Southside Quay, "commonly called the Sampson," and a courtlage. For this they were to give on every Sabbath-day, immediately after morning prayer, "one dozen of middle sort of penny loafe wheaten bread comonly called cheat bread" to the poor in most need, to be distributed by the churchwardens and overseers, under the direction of the Mayor and Justice. Payment commenced the same year, and continues.

April 10th, 1624, there was received £20, the bequest of Robert Cowche of Moteley, "w^{thin} the pish of Plymouth," to the Mayor and Commonalty for the use of poor artificers, to be lent to them gratis year by year for ever. This has disappeared.

In the accounts of money collected in aid of the sufferers by the plague of 1625 there is also a reference to a receipt of £20 as part of a legacy left by Thomas Brockadon.

Mark Cottell, of Cricklade St. Mary, in Wilts, by his will, dated March 8th, 1626, probate of which was granted in the following year, left to the town of Plymouth (where his father had sometime dwelt and was buried) £50 as a stock, the interest of which was to be distributed annually—one half to the poor and sick on St. Mark's day, with a noble to some learned preacher for preaching a sermon on the same day; and the other half every year in the week before Christmas. There is no doubt this money was paid; for in 1631 interest was carried to the credit of the poor account from Mark Cottell's legacy; and in 1634 we have the last distinct trace of it in an entry that £3 13s. 4d. had been received from Nicholas Sherwill in consideration of one £50; and that the Mayor had distributed £4 on account of the other, which he was to be allowed out of the Poor's Portion. There is a record also that money was paid under the will for preaching the sermon as provided. The Charity has disappeared, but it may have been applied to the general account of the Hospital of Poor's Portion.

In February, 1628, Robert Trelawny and John Clement had livery and siesin for the Mayor and Commonalty of four houses in New Street, feoffed by Sir Thomas Wyes of Sydenham, and Sir Samuel Rolle of Insworth. This arose out of a bequest by Benjamin Baron, merchant, of London, of £100 to the Mayor and Commonalty of Plymouth, that they should pay yearly 40s. to the parson and churchwardens of Bickington, to be given to the poor of that parish within fourteen days in bread, shoes, and stockings; also 20s. to be distributed in white and wheaten bread to the poor of Plymouth; the residue of the £100 to make a stock to set and keep the aforesaid poor people of Plymouth "on worke." The £2 have continued to be paid by the Corporation, as set forth in the Report of the Charity Commissioners, to the authorities of Bickington, but as far as Plymouth is concerned the

Charity has disappeared; and a curious fact, which I am unable to explain, is that in 1655 and some subsequent years £20 is said to be paid under the head of "Mr. Baron's annuity" to a certain Mistress Hunt. The receipts were insufficient for this purpose, and the Mayor and Commonalty had to make up the deficiency.

John Scoble, in December, 1629, bequeathed 1s. 6d. weekly to the poor of the town, during the lifetime of his wife, Elizabeth Scoble. He had then left Plymouth, and gone to reside at Wickhampton, in Dorset. She, in October, 1631, bequeathed this sum for ever, to be distributed in bread weekly; and her daughter, Johane Cole, wrote to the Mayor, November 2nd, 1641, that the charitable work begun by her father, and continued by her mother, should not through her neglect "falle to the ground, but shall rather by me receaue enlargement." This letter also is dated from Wickhampton. The accounts of the poor fund show that Elizabeth Scoble commenced payment in 1630; and it was afterwards continued by Cole. It cannot now be traced.

In 1631-32 John Bound (Mayor 1621-22, 1630-31) paid £40 for a grant in fee farm, and granted the town an annuity of 6s. 8d. for ever. Under his will, April 30th, 1642, he gave an annuity of 20s. out of Thistle Park, which was increased by his son Thomas to 40s., and continues.

In 1633 we find a yearly annuity of 20s. given to the Mayor and Commonalty for the use of the poor, under the will of George Baron, gent. The fate of this is unknown.

At this date, too, £1 yearly was paid to the poor out of the "Sheaf."

Hugh Willan, sailor, August 24th, 1644, left all the monies owing to him to the poor of Plymouth.

The most curious bequest I know of in connection with Plymouth comes next in order, and is recorded in an entry in the Receiver's Accounts for 1646-7:

"Itm recd of Mr Thomas Sherwill of London for eight yeares arrearages of an annuitie of ^{v^{li}} per annum given by Mr Thomas Sherwill M^{te} decd out of his lands att Hundiscombe to the towne to buy powder two yeares of the eight being abated him in regard of the troubles his being the first payment of that annuity to Continue five and twenty yeares . xxx^{li}

Robert Trelawny (Mayor 1633–34; member 1640), under his will of August 24th, 1643, made important bequests for charitable purposes, which, however, came to nothing, in consequence of his dying in prison a Royalist, with his estates under sequestration. Besides £200 towards the building of Charles Church, he bequeathed £600 to the town of Plymouth, on security being given to his heirs for the annual payment of £30. A sermon was to be preached on his birthday, March 25th, in St. Andrew, by the vicar of St. Andrew or Charles, exhorting people to works of piety and charity; and on the same day the £30 was to be distributed by the Mayor and Trelawny's heir male, or his deputy, as follows: 40s. to each of the vicars; £20 to a maid servant of spotless character, that had lived in Plymouth with one master or mistress five years or more, "none but maides are hereof capable;" £5 to a young sailor who had served faithfully five years or more of his apprenticeship in Plymouth; to the town clerk 10s., for keeping the account; the eldest sergeant, 5s.; and the sexton, 5s. The gifts were to be given on nomination, by the heir, mayor, and magistrates, by drawing lots, Trelawny's heir being the drawer; and every third year the heir male was to distribute the £25 to "any of my bloud and poore kindred that he pleaseth." Other charitable bequests affecting Plymouth were £10 to the poor of Plymouth; 40s. to the poor of Pennycross; £20 to the Poor's Portion; £10 to the Orphans' Aid; £10 to the Almshouse.

Sir John Gayer, one of an old Plymouth family of note, whose will was proved in 1657, left £500 to glaze all the glass windows in the New Church with good plain glass and strong lead, his arms to be set in the last; the residue was to be laid out in land by his cousin John Maddock. Part of the rents were to be paid for preaching twelve sermons a year in the New Church, before the administration of the sacrament—13s. 4d. to the preacher, 2s. to the curate or reader, 1s. to the clerk, and 1s. to the sexton for tolling the bell to give notice. The minister was to be chosen by the Mayor and Magistrates (*i.e.* Aldermen), and six of the testator's kin. The residue of the rents (10s. excepted, for a collation of wine and cakes at the distribution) to buy broad cloaths and kersies, "died into a sadd hair colour," for outward garments for poor people, to be yearly distributed in October.

The land acquired was the estate called Tor or Oaten Arishes, in

the tithing of Western Peverell,¹ the rents of which are duly devoted by the Municipal Charity Trustees to the general purposes set forth in the will, though of course the "minister" is no longer chosen in the manner directed by the Puritan knight. Tor had been purchased by John Ilcombe of Wm. Holande, of Weare, 1st Mary (1553), and became the subject of arrangement with his heirs 34th Elizabeth. William Laurence appears to have held an undivided moiety, which his widow, Margaret, carried for her life to John Clement, whom she subsequently married. William Laurence, the nephew, in 4th Charles I. (1629), leased this to John Madock, at 4s. a year rent for ninety-nine years, on a fine of £57 10s.; and in 1634 sold Madock the fee for £160. The moiety was described as consisting of fourteen acres, and the charge of £4 in favour of the Orphans' Aid was specially reserved. In 1659 it was granted by Madock to the Mayor and Commonalty. Though not specifically bought under Gayer's will, it represents therefore nearly £220 out of the £500 bequeathed. In 1674 by arrangement with Richard Bayly, of Duloe, who then held the other moiety, the estate, which consisted in all of twenty-eight acres, was divided and the joint ownership created.

Burrough's Gift occurs as the title of one of the local Charities, concerning which the Commissioners of 1820 were unable to obtain any clear information. All they could ascertain was that it consisted of £18 paid out of the tithes of Egg Buckland and St. Budeaux; and it was said to be the gift of one John Burrough, to furnish wearing apparel for the poor of Plymouth. With a very queer interpretation of "the poor," which reminds us of the well-known lines—

"The naked every day he clad—
When he put on his clothes,"

the Corporation at the time of the visit of the Commissioners had, for several years, at least, been accustomed to spend it in providing suits for the two town corporals and the governor of the Barbican! The references to this Charity in the records of the Corporation are very few, but they show two things clearly; first, that the founder was not John Burrough, but a certain Mistress Bouroughs (Bourowes); and, secondly, that the object was really to provide clothes for the poor, and not for the town officials; for both these facts are stated in connection with the entry of the first

¹ See the Orphans' Aid.

receipt under the Charity, in 1658. Moreover, there is still extant the deed of purchase by the Mayor and Commonalty, dated September 29th, 1657, from Thomas Fownes, for £288, of this annuity of £18 fee farm rent, arising out of the Rectory and Church of Egg Buckland, which had belonged to the Priory of Plympton, and which Fownes had bought in 1637. Nor need there be any real doubt as to the personality of the donor. There is an entry in the Receiver's Accounts of 1653-54 of £2 10s., spent on a banquet for "Mrs. Trosse, daughter of Mrs. Burroughs of the city of Exon, and her Companye." This Mrs. Burroughs was Rebecca Burroughs, widow of Walter Burroughs (or Borough), twice Mayor of Exeter. He was, during his lifetime and by will, one of the greatest benefactors the city ever had; and she followed his excellent example. There is no direct evidence that she was the founder of the Plymouth Charity; but the inference that she was so can hardly be resisted. This continues.

Moses Goodyear, merchant, left under his will, in 1663, two sums of £50—one to the Hospital of Poor's Portion, and the other to the Old Almshouse, his direction being that these sums should be laid out in the purchase of freehold lands for these two Charities. Nothing is now to be traced of this bequest.

John Hill, in 1672, gave £50 to the Mayor and Commonalty in consideration of the payment by them of 52s. yearly for ever, to be spent in the distribution of twelve penny wheaten loaves every Sunday morning at St. Andrew. This payment is still made.

And next we have the Charity founded by John King (Mayor 1659-60), concerning which there is a tattered draft indenture among the muniments of the Corporation. This was one of the Charities that the Commissioners of 1820 gave up as a bad job. A tablet in Charles Church recorded that in 1676 King had given to the churchwardens and overseers of this parish £100 to be kept as a stock, and the interest distributed in bread; and the Commissioners discovered that the Mayor and Commonalty had acknowledged in 1685 having received the £100 for this purpose, while the returns of 1786 stated that it was then vested in the parish, and producing £4 a year. The Charity had long ceased to operate when the Commissioners visited Plymouth, and they did not trouble themselves to carry the matter any further.

And so with the Charity founded under his will, May 2nd, 1668, by Stephen Ollaver, or Ollavean, or Ollivier, merchant, of Exeter, who left a rent-charge of £5 4s. on his houses in that city, to be distributed by 2s. weekly in wheaten bread in either of the parish churches of Plymouth on every Lord's-day, immediately after the service, to poor people, preference being given to the widows of mariners and seamen. This and other Charities established under his will Ollivier kept up during his life, but it had been lost long before 1820.

The poor of Charles have been more fortunate touching £50 left by Mary Collins, or Gosling, for distribution in bread; for the payment of £2 10s. in respect of this is still kept up by the Corporation. The liability was admitted, like that in respect of John King's endowment, in the deed by which the Corporation properties were transferred, pending the grant of the new charter under Charles II.

No doubt there are other Charities that should be included in the list, but with the exception of a few trifling bequests no record has been preserved of them. Enough has been said, however, to show that we must not rely on the Official Reports either for fullness or accuracy.

MODERN WITCHCRAFT.

SYLLABUS OF LECTURE BY JOHN RICE.

(Read October 23rd, 1884.)

LIMITATION of the word "modern" to witchcraft of the Christian era. Essential idea in modern witchcraft: compact between a human being and Satan. Witchcraft declared a crime by the Early Church. Laws against it. The "Sorcery Bull" of Pope Innocent VIII. The *Malleus Malificarum*, or commentary on the Bull by the Inquisitors appointed under it. The principles of witchcraft; the criminal code and mode of procedure, as laid down by the *Malleus*. Typical trials: at Arras, in France; at Mora, in Sweden. Removal of witchcraft from the English statute-book in 1736. Last execution in Germany in 1749. Last persecution in America in 1692, in Massachusetts. That persecution the only one fully and faithfully recorded. Analysis of it. Inferences. Some confirmatory facts.

THE LATEST STORY OF THE CUNEIFORM
INSCRIPTIONS.

ABSTRACT OF PAPER BY REV. G. EVANS, M.A.

(Read October 30th, 1884.)

The lecturer spoke—1. Of a fourth creation tablet.

2. Mr. Rassam's discoveries at Sippara: (a) Inscription to the sun-god. (b) Inscriptions throwing fresh light on Babylonian chronology. (c) Special reference to the king *Phul* mentioned in 2nd Kings.

3. Pinches' discovery of the originals of Babylonian history, and

4. The cylinder of Nabonidus and its importance.

Mr. Evans then proceeded to refer to two Babylonian bricks in the Museum, observing: The two Babylonian tablets now in the Museum of the Athenæum were brought, as a label testifies, from the Blue Mosque at Mooltan by Major-General Henry Jacob (then Captain Jacob) in January, 1849, and presented to the Institution in 1851. The tablets are of brick, and the writing upon them is in the old Babylonian cuneiform character. Inscriptions in the same kind of cuneiform writing may be seen in the earlier pages of the first volume of the *Cuneiform Inscriptions of Western Asia*, published by the Trustees of the British Museum, and also in most of the inscriptions dating from the time of Nebuchadnezzar III. The one tablet contains seven short lines, and the other three long ones. In the former the characters are mostly legible, with the exception of two or three, which are somewhat indistinct. In the latter nearly a half of the tablet is very indistinct, but on very close inspection I have discovered what the characters must necessarily be. I first set about deciphering the former as being the more legible of the two; and on comparing the other with it, I found that both tablets told the same story. There were differences in the characters found in the two, and this was because on the one tablet a word would be written ideographi-

cally, and on the other phonetically. Thus there are two different ideographs given for the word *son*. The word for 'landmark' is written syllabically on the seven-lined tablet, thus: *ku-dur-ri*; on the three-lined tablet it is written ideographically. The word *nasaru*, 'to protect,' is written also in two different ways. 'And' is represented by two ideographs, as is also the word 'Babylon.'

The transcription, with the translation, of the seven-lined tablet is as follows:

1. *ilu Nabu — ku-dur-ri-usur*
Nebuchadnezzar.
2. *sar Babili*
King of Babylon.
3. *za-ni-in E-sag-ila*
Restorer of the temple Sag-ila.
4. *u E-zi-da*
And of the temple Zida.
5. *ablu a-sa-ri-du*
son eldest
6. *sá ilu Nabu-abal-usur*
of Nabopolassar.
7. *sar Babili*
King of Babylon.

The translation thus reads, "Nebuchadnezzar, king of Babylon, restorer of the two temples Sagila and Zida, the eldest son of Nabopolassar, king of Babylon." I may here point out what characters are indistinct in the three-lined tablet, by writing down the words of the original:

1. *ilu Nabu-kudurri-usur sar Bab-ilu (?) ki za-[ni-in]*
2. *E-sag-ila u E-zi-da [ablu a-sa-ri-du]*
3. *sá ilu Nabu-abal-usur sar Babili.*

The words in italic are very faint on the tablet; whereas those in brackets I supply without the slightest doubt as to their being what was on the tablet.

NOTES ON THE TEXT.

Nabu = 'the god Nebo, the Babylonian Mercury;' he is patron of the art of writing. In a tablet printed in my work, published for the Hibbert Trustees by Williams and Norgate, Nebo is called *dupsar gimri*, 'the scribe of all'; *usur*, imperative of a verb *nasaru*, 'to protect'; *kudurru* = 'landmark'; so that the name

Nebuchadnezzar means, 'god Nebo, protect the landmark.' I would also point out that the Assyrian supports the reading of this king's name with an *r*, not an *n*, in the fourth syllable.

Sarru corresponds to the Hebrew *sar*, and is the usual word for king. *Sar* is in the construct state.

Babilu = 'Babylon.' On the seven-lined tablet this is represented by four characters. The first is the usual ideograph for 'gate' = *babu*; the second = *ilu*, 'god'; the third = *ra*, the ending of the word in the Akkadian language; the fourth is a determinative *ki* for 'town.' The name is to be read *ka-dingir-ra ki*. *Ka* is the equivalent in Akkadian to *babu* in Assyrian. The name *Babilu* is shown by these ideographs to denote 'the gate of god.' The word *Babel*, its name in Hebrew, has nothing whatever to do with the root בבל, 'to confound.' The name of the town is also written syllabically *Ba-bi-lu*, &c.

Zânin, from the root *zananu*, 'to restore.' Kal participle = *zaninu*; here in construct state before the succeeding words.

Esagila and *Ezida* are the names of two temples. The former was the chief temple of the god Merodach. Its name is represented on the tablet by three characters. The first is the usual ideograph for *bîtu* (בית), 'house,' and is the Akkadian Ê. The second has the ideographic value *kakkadu*, 'head,' and syllabic value *sag*. The third has the syllabic value *ila* and the ideographic value 'to lift up'; so that the name denotes, according to its ideographs, 'the house that lifts up its head;' i.e. '*hochragendes haus*' in German. This temple is spoken of as the "palace of heaven and earth, the dwelling of Bel and Merodach." It was in the form of a tower, and some have thought that this tower is that referred to in the story about the tower of Babel in Genesis xi. The Berlin Professor Ebrard Schrader, commenting on Genesis xi. 4, and on the words 'city and a tower,' in his work, *Die Keilinschriften und das alte Testament*, remarks that there can be little doubt that these words refer to an actual building, and this can only have been, he says, one of the two sacred buildings, built in the form of a tower, whose ruins are yet to be seen on the site of ancient Babylon and on the town lying south of it, Borsippa. The tower-temple (which among the Babylonians was called a *ziggurat*) in Babylon is the one named *Esagila* in our text. The one in the town of Borsippa was called *Ezida*, and was dedicated to the god Nebo. It consisted of seven stages, each being

dedicated to one of the planetary bodies. On the cylinders of Nebuchadnezzar this temple is spoken of as "the temple of the seven lights of heaven and earth." In course of time it lost its pinnacle, which Nebuchadnezzar restored. *Ezida* means 'the eternal house.'

Ablu = 'son ;' *asaridu* = 'the eldest.' This word *asaridu*, written on both our tablets syllabically, is sometimes written ideographically, and represented by two characters whose syllabic value are *rês* and *dan* respectively. This ideograph explains to us that the *asaridu* is 'the mighty head or chief,' 'the first or foremost.' In combination with *ablu* it means 'the eldest son.'

Nabu-abal-usur = 'Nabopolassar.' The name means, 'god Nebo, protect the son.' The text tells us that the Nebuchadnezzar here spoken of is the eldest son of Nabopolassar. This was the third king of that name, and reigned from 604 to 561 B.C., a period of forty-three years. His father reigned twenty-one years, from 625 to 604 B.C. It was in the reign of Nebuchadnezzar that the Jews were carried to Babylonish captivity, in the year 586 B.C.

I should mention that the fame of Nebuchadnezzar rests more upon his buildings than upon his conquests. There are a large number of inscriptions which belong to his reign ; some on bricks, such as those in this Museum, some on clay cylinders, and one on cameo. The majority of the inscriptions refer to the buildings of the king at Babylon and Borsippa. There is in the Museum at Zurich a six-lined inscription on brick, which is almost literally the same as our text. (See Schrader's above-mentioned work, p. 363 ; and see further the new work published by the Religious Tract Society, and written by Mr. Ernest Budge, of the British Museum, p. 69.) This latter work should be in the hands of all who take an interest in these studies. We are told by Professor Sayce, in his work on *Babylonian Literature*, p. 5, that a few cuneiform inscriptions from Babylonia being in England, "Dr. Hincks found himself able to read the name of Nebuchadnezzar and the record of his buildings." It is possible that this first decipherer of our inscriptions worked in his early attempts at a tablet like the one we have been considering in this paper.

ON SOME PHYSICAL MEASUREMENTS.

SYLLABUS OF LECTURE BY J. MERRIFIELD, LL.D., F.R.A.S., F.M.S.

(Read November 6th, 1884.)

MEASUREMENT of lines. Units of length. The inch and the metre. The units of weight and capacity. The superiority of the French mode over the English. How hundredths and millionths of an inch are determined. The pendulum as a unit of length. How it is used for finding the force of gravity. Measurement of angles. Zenith sector; how used. Measurement of base lines. Colonel Colby's instrument. Triangulation in a survey. Measurement of an arc of a meridian, and from thence the size of the earth determined.

ODDS AND ENDS OF MONETARY HISTORY.

SYLLABUS OF LECTURE BY JOHN G. NORMAN.

(Read November 13th, 1884.)

INTRODUCTION. Difficulties of definition. What the professors say. What the city men say. Money-market money. Oldest form of money. Coinage: its early history. Our own £ s. d. Bank-notes: their history. Negotiable securities. Our financial friends the Jews. The Caossini and the Lombards. The goldsmiths of London. Various opinions about bankers. The ethical side of the subject. Conclusion.

SEALS (PINNIPEDS) AND THEIR GEOGRAPHICAL DISTRIBUTION.

SYLLABUS OF LECTURE BY F. H. BALKWILL.

(Read November 20th, 1884.)

PINNIPEDS. Classification of seals, and what relation this has to the question of evolution. Comparative anatomy. Life, habits, and capture of several species. Geographical distribution. Conclusion.

LOCAL HERALDRY.

PART II.

BY ARTHUR J. JEWERS, F.S.A.

(Read November 27th, 1884.)

WE now come to the latest addition to our local heraldry; viz., the shields in the Athenæum. The Council having (in 1883) accepted an offer of a series of armorial shields of local celebrities,¹ the following have been placed in the Museum. In describing them we will commence with the south side, proceeding from the east end to the west, and so round the gallery, numbering the shields in consecutive order.

I might occupy your time with accounts of the domestic and social habits of the times in which lived the men commemorated in the historical portion of the series. We might picture, more or less graphically, the lives of the gallant seamen and bold merchant adventurers who, particularly in the latter part of the sixteenth and earlier half of the seventeenth centuries, made our old town of so much note, and helped to lay the foundation of the present greatness of England, in her extended colonies and commercial relations. We might depict their mansions, whose windows were often adorned with armorial glass setting forth the gentle descent of their owners, and of which so few traces remain. We might clothe, as it were, in living flesh the dry bones of such meagre historical data as the records of births, marriages, and deaths. Bare as these at first sight seem, what a tale is hidden in them of joy and happiness, and anon what sorrows and pain—the rejoicing for the birth of an heir to accumulating wealth, of a son to extend the fame of a worthy family, or the advent of a daughter to gladden and brighten the home; and then the brightness is

¹ The author omits to state that the Society is indebted to him for the very valuable and artistically painted series of shields, the blazon of which is described in this paper.—ED.

darkened by the hand of death. Or we meet the forms of strength and beauty at the marriage altar, and we see them depart for the mingled joys and sorrows that are the inevitable portion of human life ; while perhaps the next page of the record will tell us that the ground has closed over one or the other, thus cutting short the union, and further on that the survivor has found another to take the place of the departed. Thus we may follow a man through his life until he rests from all earthly cares, after prospering in business, and filling honourable offices among his fellow-men. All this might be enlarged on until we could almost see them breathing and moving amidst their quaint surroundings. But this would needlessly take up both time and space ; therefore, if not so interesting as the whole story if well told, it is necessary that this paper should be confined to the dry bones of recorded facts, which those who will may clothe at pleasure in the details of circumstance.

Before proceeding with a description of the shields in the gallery of your Museum, it may be well to state that every effort has been made to secure correctness. Whenever possible, in any doubtful cases, application has been made to the representatives of the families ; but the lecturer cannot hold himself responsible for statements when unsupported by evidence, and in some instances persons have been omitted who otherwise would have been mentioned simply because no arms could be satisfactorily assigned to them. In the arrangement of the shields they have been divided into two parts—(1) historical personages, and (2) prominent members of the Plymouth Institution. The first of these divisions has been grouped—(a) the great seamen of the Elizabethan period who were connected with Plymouth or its neighbourhood ; (b) families territorially and historically prominent in connection with the neighbourhood, and (c) representatives of mercantile families which have flourished in the town, which will be found chiefly of the Stuart period. In the second division I have included those deceased members of the Plymouth Institution who were either specially noted for literary or scientific acquirements, or who have taken an active part in the advancement of the interests of our society. It is to be hoped that this latter section especially will be from time to time extended, and that as the commemoration of worthy actions and well-spent lives these shields may become an incentive to those who come after to emulate those whose memory is thus per-

petuated, and to make their lives in every way truly noble and worthy. The arms of the wife or wives, whenever the information with respect to them could be correctly ascertained, has been given in order that the shields might have a more personal character.

1. Sir John Hawkins, *Sa. on a base barry wavy of four arg. and az., a lion pass. or, in chief three bezants* (in 1571 an augmentation was granted by Robert Cook, Clarenceux; viz.); *on a canton or, an escallop betw. two palmers' staves of the first*. This noted Plymouth hero, though not so well-known to fame as Sir Francis Drake, is equally deserving; but after the exhaustive paper read before the Devonshire Association¹ by Mr. R. N. Worth, it is quite needless to say much here. His grandfather was John Hawkins, of Tavistock, whose wife was Joan, daughter of William Amadas, of Tavistock or Launceston. By this lady he had issue, *inter alia*, William Hawkins, of Plymouth, who married Mary, daughter of William Trelawny, and by her was father of Sir John Hawkins.

The earliest entry in the existing registers of St. Andrew is the baptism, 10th May, 1581, of Francis, son of Mr. William Hawkynges. This William Hawkynges was a brother of Sir John. Sir John Hawkins was twice married, first to Katherine Gunson, and secondly to Margaret Vaughan. The family appear to have spread, and we find several variations of the arms; as, for instance, on a slab in Saltash Church, which commemorates Gertrude, wife of Captain Edward Hawkins, R.N. She died 21st June, 1823, and he died 30th April, 1829, the arms being *Sa. on the sea in base vert a lion pass. coward, over its head five annulets*; crest, *a Moor's head, side face, coupéd below the shoulder, vested*. This variation of the coat of Hawkins is worth noting. It is not given by Sir J. B. Burke, though the coat assigned by the last-named to John Adair Hawkins, of Lewer, county Dorset, is somewhat like it. It may also be noted that Sir J. B. Burke gives for Hawkins, of Devonshire, *Az. a chev. erm. betw. three oakslips or*, being the coat of Amadas.

2. Sir Francis Drake, *Sa. a fess wavy betw. two estoils* (called in the grant pole-stars) *arg. imp. Arg. three rams pass. sa.*; Sydenham. Sir Francis Drake, like Sir John Hawkins, is too

¹ *Trans. Devon. Assoc.* vol. xv. (1883), pp. 246-285.

well known to need any account of him to be given here. The main incidents in his life are familiar to most persons, as well as Prince's account of the grant of arms to him. This subject was treated critically a few years since in the pages of the *Herald and Genealogist*,¹ and this was reviewed, with additional evidence, in an early number of the *Western Antiquary*. It is therefore unnecessary to add to what has been already stated in the first part of this paper.

Sir Francis married first at St. Budeaux, being entered in the parish register as "Francis Drake and Mary Newman," married 4th July, 1569. It is perhaps worth noting that no distinctive style is used, although in other cases in the same register at that period we find the appellations, "esquire," "gentleman," or "gentlewoman," as required. The burial of the first wife of Sir Francis is recorded both at St. Budeaux and St. Andrew, in the former as "Mary Drake wife of S^r Francis Drake Knight," buried 25th January, 1582; and in the latter register as "The Lady Mary, wife of Sir Francis Drake, buried 20th January, 1582." Sir Francis married secondly Elizabeth, only daughter and heir of Sir George Sydenham, of Combe Sydenham. This lady became the second wife of George Courtenay, fourth son of Sir William Courtenay, of Powderham, but had no issue. Sir Francis Drake, having no children by either wife, and consequently having no descendants to inherit the estates he had acquired, left them to his nephew, Francis Drake, son of his brother Thomas Drake, who was created a baronet, and whose male descendants are presumed to have become extinct on the death of Sir Francis Henry Drake, fifth baronet, who died unmarried 19th February, 1794, aged 70. The property then passed to his nephew, the second Lord Heathfield, on whose death, unmarried, 26th January, 1813, aged 63, the estates passed to his nephew, Thomas Trayton Fuller, Esq., who took the additional names of Eliott Drake, and was created a baronet, with special remainder to his two next brothers and their issue, and was accordingly succeeded by his nephew, the present Sir Francis George Augustus Fuller-Eliott Drake, Bart.

3. Captain William Cocke, *Arg. a chev. eng. gu. betw. three cocks' heads erased sa., thereon a crescent arg. for diff.; a canton az. charged with an anchor erect or.* Captain Cocke was a native

¹ *Herald and Genealogist*, vol. viii. pp. 307-313, 476-483.

of Plymouth, and was one of the heroes who volunteered, and at their own expense equipped, vessels for the defeat of the Armada. In the fight with the Spaniards he distinguished himself by his bravery, and was killed in the heat of the action. Mr. Gregory Cocke was buried at St. Andrew 1st August, 1589. In the same registers we find the marriages of John Martyn and Grace Cocke, widow, 12th August, 1583; William Cocke and Catherine, his wife, 11th January, 1586; Anthony Cocke and Maud Burnard, 8th October, 1592; Lucas Cocke and Joan Weekes, 9th September, 1594; William Cocke and Joan Rawlin, 12th May, 1595. There are a number of other entries relating to the name, but we need not quote them here. His arms, it is said, remained until recently over a doorway in an old house in Plymouth, but we have failed to find them. There are many entries of the name of Cocke in the earlier registers of St. Andrew.

4. Sir Walter Raleigh, *Gu. a bend lozengy arg., over all a label az., a martlet arg.*, for difference of the fifth son: imp. *Gu. on a chev. arg. three bars gemelles sa.*; Throckmorton. Sir Walter Raleigh was son of Walter Raleigh, of Fardell, in Cornwood, by his third wife Catherine, daughter of Sir Philip Champernoun, of Modbury, and relict of Otho Gilbert, of Greenway, on the Dart, and grandson of Wymond Raleigh by Elizabeth his wife, daughter of Sir Richard Edgecumbe.

Sir Walter was born in 1552 at Hayes, in Budleigh, not at his father's patrimonial estate of Fardell. He married Elizabeth, daughter of Sir Nicholas Throckmorton, by which lady he had issue two sons, Walter and Carew. The former died young, but the latter married and left issue.

Sir Walter Raleigh was one of those able men Queen Elizabeth had a peculiar faculty for gathering around her, men who shone either as polished courtiers, gallant warriors, or skilful statesmen. His life, full of romantic incidents even for those romantic and stirring days, is an oft-told tale known to all, though his shield of arms may appropriately have its place in this series, as that of his grandfather does in the hall at Cotehele.

5. Sir Humphry Gilbert, *Arg. on a chev. sa. three roses of the field*: imp. *Az. a lion ramp. or*; Ager. He was another of the Elizabethan heroes of the sea; a younger son of Otho Gilbert,

of Greenway, on the Dart, by Catherine, daughter of Sir Philip Champernown, of Modbury. He was thus half-brother of Sir Walter Raleigh. Sir Humphry was born about 1539, was Commander-in-Chief and Governor of Munster, and in 1571 M.P. for Plymouth. He was also a spirited navigator; and having sailed from Plymouth 11th June, 1583, after visiting Newfoundland, he was lost at sea in September of that year. Of his peculiar tragic death Longfellow has written—

“Eastward from Campobello
Sir Humphry Gilbert sailed;
Three days or more seaward he bore,
Then, alas! the land wind failed.

“Alas! the land wind failed,
And ice-cold grew the night;
And never more, on sea or shore,
Should Sir Humphry see the light.”

* * * *

We are told that on the night of the 9th September the lights of his ship were suddenly lost sight of by the crew of the *Hind*—

“And like a dream in the Gulf stream
Sinking, vanished all away.”

Sir Humphry married Ann, daughter of Sir Anthony Agar, of Kent, by whom he had issue several children, of whom were John, Humphry, Otho (died in Belgium), Arthur (killed at Amiens, in France, s.p.), Anthony (ob. s.p.), Raleigh, Adrian.

6. Sir Richard Grenville, *Gu. three sufflues or organ rests or: imp. Az. fretty arg., a chief or*; St. Leger. This bright example of the English gentleman of the Elizabethan era, so well known to the readers of Kingsley's *Westward Ho!* was the representative of the ancient family of Grenville, of Stowe, being the son and heir of Roger Grenville, who was drowned in the *Mary Rose*, at Portsmouth, in 1545, by his wife Thomasin, daughter of Thomas Cole, of Slade. Sir Richard—named in the will of his grandfather, Sir Richard Grenville, of Stowe, as “son of Roger, my son and heir apparent”—was aged eight years and no more at his grandfather's death in 1551 (Inq. P.M.), and died from his wounds in a sea-fight in the *Revenge*. Sir Richard married Mary, daughter of Sir John St. Leger, and heir to her brother. She was buried, as appears by the Parish Register, at Bideford, 5th November, 1623, “in the Grenvilles Ile.” By this lady he had issue: Sir Bernard Grenville,

of Stowe; John, killed in the Indies under Drake, ob. s.p.; Bridget, unm.; Catherine, married Justinian Abbot, of Hartland; Mary, married Arthur Tremayne, of Collacombe; Rebecca, buried at Bideford, 9th June, 1589; Roger, buried 10th December, 1595, at Kilkhampton; and Ursula, buried 10th March, 1643, at Bideford. The present representatives of this family are: the Duke of Sutherland, descended from Lady Jane Grenville, eldest daughter and coheir of Sir John Grenville, created Earl of Bath; the Marquis of Bath and Earl of Dysart, descended from coheirs of John Lord Carteret, by Lady Grace, second daughter and coheir of the above Earl of Bath; Lord Foley, descended from Grace, third daughter and coheir of George Grenville, Lord Lansdowne; and Bevell Granville, Esq., of Wellesbourne Hall, descended from John D'Ewes, of Wellesbourne, who married Anne, daughter and coheir of Bernard Grenville, Esq., M.P.

7. Valletort, *Arg. three bends gu. within a bordure sa. charged with bezants*. This family was one of the early territorial lords of Plymouth, then known as Sutton. Ralph de Valletort in 1165 held, according to the *Liber Niger Scaccarii*, fifty-nine knights' fees in Devon and Cornwall, of which the principal was Harberton, near Totnes. King Henry I. gave to Reginald de Valletort among other lands the manor of Sutton, which then became Sutton Valletort. Walter de Valletort gave to the monks of Plympton the island of St. Nicholas cum caniculus, and Ralph de Valletort gave them land on which to erect a mill-dam at the spot now called Millbay. Let us hope the grants did not arise from the fact that, in the words of Longfellow—

“In his chamber, weak and dying,
Was the Norman baron lying.”

* * * *

“In that hour of deep contrition
He beheld with clearer vision,
Through all outward show and fashion,
Justice, the Avenger, rise.

* * * *

“But the good deed, through the ages,
Living in historic pages,
Brighter grows and gleams immortal,
Unconsumed by moth or rust.”

However this may have been, the same spirit certainly did not actuate his successor, John de Valletort, who, about the middle of

the twelfth century, had a contest with the monks of the same priory concerning the presentation to the benefice of Sutton. The family became extinct about 1290, the heirs being Hen. de Pomerai and Roger Corbet.

8. Edgcumbe, *1 Gu. on a bend erms. cotised or, three boars' heads coupé arg.*; Edgcumbe: *2 Sa. a ram's head caboshed arg. horns or*; Durnford, originally Rame: *3 Az. an eagle displ. or*; Bigbury: *4 Arg. a chev. sa. betw. three round buckles gu.*; Fitz-Walter. The family of Dernford, or Durnford, was of some importance in Plymouth at the close of the fourteenth and early part of the fifteenth centuries. There is in the possession of the Earl of Mount Edgcumbe a letter addressed to Stephen Dernford, of Plymouth, from the King of Portugal, dated 1399. His son, Stephen Dernford, was of East Stonehouse and Rame, which came through the heiress of Rame. This son, James, married the co-heir of Bigbury, by whom he had a son, James, whose daughter and heir, Johanna, married Sir Piers Edgcumbe, of Mount Edgcumbe, ancestor of the present Earl of Mount Edgcumbe.

9. Bishop Stafford, *Or a chev. gu. within a bordure sa. charged with eight bishops' mitres ppr.* Edmund Stafford, brother to Ralph, Lord Stafford, consecrated Bishop of Exeter at Lambeth by William Courtenay, Archbishop of Canterbury (1395). He was a man of considerable talent, and some time Lord of the Privy Seal. He greatly encouraged the inhabitants of Plymouth to build a castle to defend their town, in which work he rendered them assistance, and, according to Risdon, his arms were sculptured on it. The Bishop died 4th September, 1419, after having presided over the See of Exeter twenty-three years, and was buried on the north side of the Lady Chapel in his cathedral under an elegant tomb, on which is his effigy in alabaster.

10. Sir William Ferrers, *Or on a bend sa. three horse-shoes of the field*; Ferrers: imp. *Az. a bend or, over all a label gu.*; Carmynowe. Sir William Ferrers married Matilda, daughter of Roger de Carmynowe. From this family Beer Ferrers and Newton Ferrers obtained their second appellation, and in the church of the former their arms may still be seen. Of a younger branch of this family was George Ferrers, Esq., M.P. for Plymouth in 1542.

11. Lord Willoughby de Broke, *Quarterly*: I. *Quartered 1 & 4 Sa. a cross eng. or*; Willoughby: 2 & 3 *Gu. a cross moline arg.*; Beke: II. *Gu. a cross fleury arg.*; Latimer: III. *Gu. four fusils conjoined in fess arg., each charged with an escallop sa.*; Cheney: IV. *Or a chev. gu. within a bord. invecked sa.*; Stafford. On the centre *a crescent for difference*: imp. *Gu. a saltire vaire, betw. twelve billets or*; Champernoun. This was Sir Robert Willoughby of Broke, who having taken arms in the cause of Henry Tudor, Earl of Richmond, was, upon that nobleman becoming King Henry VII., summoned to Parliament as Lord Willoughby de Broke. His lordship became connected with this neighbourhood by marrying Blanche, daughter and heiress of Sir John Champernoun, by whom he had issue Robert, second Lord Willoughby de Broke; Elizabeth, married to John, Lord Dynham; and Margaret, married to Nicholas Assheton, of Callington; and is there buried under a monument with a brass to his memory. A Saracen's head, crowned, and a ship's rudder, badges of the Willoughby family, are to be seen in Landulph Church on some ancient bench-ends. His lordship, who was a Knight of the Garter (8th King Henry VII.) and Marshal of the king's army in France, was Lord High Steward of Plymouth. He died in 1502.

12. Roger Budockshed, *Sa. three lozenges in fess arg. betw. as many bucks' heads caboshed of the second*: imp. *Gu. a saltire vaire betw. twelve billets or*; Champernoun. Roger Budockshed, whose ancestors resided at Budockshed, or Budockside, now Butshed, from the time of King Henry III., was born at the family mansion. He built the present church of St. Budeaux in 1563, and gave the village green in 1566; he was M.P. for Plymouth in 1553-54. Roger Budockshed married Frances, daughter of Sir Philip Champernoun, of Modbury, by his wife Catherine, daughter of Sir Edmund Carew, Baron Carew. He had issue by this lady (1) John, (2) Dorothy, (3) Katherine, and (4) Richard, who all died young. (5) Philip, who married Margery, daughter of Robert Smith, of Tregonick, but died without issue at Carrickfergus in 1583. (6) Winifred, married to Sir Edward Gorges, Vice-Admiral of the Fleet (he died in 1584, and was buried within the Tower of London), by whom she had issue Tristram Gorges, who inherited Butshed; Robert Gorges, who died in 1575; Sir Arthur Gorges, of Chelsea, who married first

Douglas, daughter of Viscount Bindon, and secondly Elizabeth, daughter of Henry, Earl of Lincoln, and died in 1625; and Sir Edward Gorges, buried in Westminster Abbey. (7) Margery, married to Robert Smith of Tregonick, Esq.; (8) Elizabeth, married to John Amadas, of Plymouth; and (9) Agnes, married to Oliver Hill, of Shilston. Thus came to an end in the male line a family which had flourished for fourteen descents at their manor of Butshead. This property passed to the Gorges family, who, however, did not hold it long. Tristram Gorges (the son of Winifred Gorges, *née* Budockshed) married Elizabeth, daughter and heir of Martyn Cole, Esq., of Cole Auger, and had several children, who died young; and on the death of the last of them, William Gorges, Esq., Butshed passed to his uncle, Sir Arthur Gorges, who sold the estate to Richard Treville, Esq., and their monuments alone perpetuate their memory in the church erected by the liberality of Roger Budockshed. These would have perished at the restoration of the church a few years since, had they not been happily preserved by the exertions of Mr. John Whitmarsh, of Stoke, at that time of St. Budeaux. This digression to Gorges as the representatives of Budockshed, and closely related to Sir Ferdinando Gorges, whose shield comes next in order, may not be out of place; while the following register-extracts can hardly fail to prove interesting:

ST. BUDEAUX PARISH REGISTER.

BAPTISMS.

1541.	Aug. 2.	John, son of Roger Butshed, Esq ^{re} .			
1542.		Dorothy, daughter of Roger Butshed, Esq.			
1546.		Richard, son of	"	"	"
1574.	Jan. 24.	Christopher, son of Tristram Gorges, Esq.			
1576.	Mar. 31.	Butshed	"	"	"
1582.	Aug. 16.	Winifred, daughter of	"	"	"
1584.	Nov. 23.	William, son of	"	"	"
1586.	Sept. 13.	Duglas, daughter of	"	"	"
1592.	Dec. 10.	Susan	"	"	"
1595.	Aug. 22.	Thomas, son of	"	"	"
1596.	Dec. 27.	Ferdinanda, daughter of	"	"	"

WEDDINGS.

1572.		Tristram Gorges, Esq., and Elizabeth Cole, gentlewoman.
1612.	Feb. 11.	Samson Mannington, Esq., and Mrs. Mary Gorges.
1614.	Aug. 1.	Edward Courtenay, Esq., and Elizabeth Gorges, gentlewoman.
1615.	July 5.	Edward Trelawny, gent., and Ferdinanda Gorges, gent.
"	"	17. William Courtenay, Esq., and Duglas Gorges, gent.

BURIALS.

1542.	Dec. 5.	John, son of Roger Butshed, Esq.
1543.	Dec. 20.	Dorothy, daughter of „ „ „
1545.	Oct. 26.	Katherine „ „ „
1547.	April 8.	Richard, son of „ „ „
1572.	Feb. 21.	A man child of Tristram Gorges, Esq., deadborne.
1573.	Dec. 6.	Katherine, wife of Martyn Cole, gent.
1574.	April 5.	Christopher, son of Tristram Gorges, Esq.,
1576.	Feb. 3.	Roger Butshed, Esq ^{re} .
1589.	May 14.	Martyn Cole, gent.
1592.	Feb. 26.	Susan, daughter of Tristram Gorges, Esq.
1595.	Jan. 20.	Thomas, son of Tristram Gorges, Esq.
1607.	Jan. 24.	Elizabeth, late wife of Tristram Gorges, Esq., of Budockshed.
1608.	May 8.	Tristram Gorges, Esq.
1614.	Dec. 14.	William Gorges, Esq.

13. Sir Ferdinando Gorges, *Party per pale of three, the centre quarterly: 1 and 4 Lozengy or and az. a chev. gu., Gorges modern; 2 and 3 Arg. a whirlpool az., Gorges ancient; over all a martlet for diff., Gorges: on the dexter in chief, Sa. three bells arg., Bell, first wife; in base, Gu. a chev. arg., Fulford, second wife: on the sinister side, per fess, in chief, Lozengy or and az. a chev. gu. charged with a crescent or, for diff., Gorges, third wife; in base, the same arms as the last with an annulet on the chev. instead of the crescent for diff., Gorges, fourth wife.*

Sir Ferdinando Gorges was the fourth son of Sir Edward Gorges, of Wraxhall, county Somerset, by his second wife, Mary, daughter of Sir Anthony Poyntz, and was a younger brother of Sir William Gorges, who married the heiress of Budockshed. He was born in 1565, held for some time the post of captain of the castle of Plymouth, and took a very active part in the colonization of North America, a very interesting account of which might be written did space permit. Sir Ferdinando married four times: first, Ann, daughter of Edward Bell, Esq.; she died in 1620. He married secondly Mary Fulford, widow of Thomas Achim; and she dying in 1623, Sir Francis Fulford and John Berriman administered to her estate, 1st August, 1623. Sir Ferdinando married thirdly Elizabeth, daughter of Tristram Gorges, Esq., of Butshed, and relict first of Edward Courtenay, and secondly of — Blyth. She survived until 1629, and to console himself for her loss Sir Ferdinando Gorges took to wife another lady of the same name—Elizabeth, daughter of Sir Thomas Gorges, of Lang-

ford, county Wilts, and relict of Sir Hugh Smith, of Long Ashton, county Somerset. This lady was a sister of Edward, Lord Gorges, and a niece of her second husband, whom she survived, dying in 1658, Sir Ferdinando having died in 1647, aged 82 years.

14. Richard Carew, *Or three lions pass. in pale sa. armed and langued gu.*; Carew: imp. *quarterly 1 and 4 Sa. six swallows arg*; Arundell: *2 and 3 Or on a chev. betw. three birds' wings az., as many bezants*; Cosworth. Richard Carew, of Antony, Esq., son and heir of Thomas Carew, of Antony, Esq., by his wife Elizabeth, daughter of Sir Richard Edgcumbe, was born in the early part of the year 1556, being aged eight years and two hundred and thirteen days at the death of his father on the 12th Feb., 1564. He is best known as the author of the *Survey of Cornwall*, which shows him to have been an antiquary of no mean merit for those days. Anthony à Wood gives a long account of him, and Camden also speaks highly of his qualifications. He was High Sheriff of Cornwall in 1586, and sometime member of Parliament for Saltash. Richard Carew married Julian, daughter of John Arundell, of Trellice, by his first wife Katherine, daughter and co-heir of Nicholas Cosworth, of London, and relict of Alan Hill. This lady was one of the co-heirs of her mother, but not of her father, who by a second wife was ancestor of the Lords Arundell of Trellice. Richard Carew had by his lady several children, of whom the eldest son, Sir Richard Carew, was created a baronet, which title became extinct on the death of Sir Coventry Carew, Bart., and Antony passed to the family of Pole. Jane, daughter of Sir John Carew (grandson of Sir Richard above), Bart., by his first wife Sarah, daughter of Sir Anthony Hungerford, married Jonathan Rashleigh, of Menabilly; their daughter and heir, Sarah, married the Rev. Carolus Pole, third son of Sir John Pole, of Shute, Bart. Their grandson took the name and arms of Carew by the will of Sir Coventry Carew, on his succeeding to Antony, and was father of the present W. H. Pole-Carew, Esq., of Antony. This family is one of the most ancient and noble in the kingdom, and has enjoyed several hereditary titles, among them the earldom of Totnes (extinct), the present Lord Carew, the old baronetcies of Haccombe (existing), and of Antony (extinct), and the recent creation of Adm. Sir Morice Carew (also extinct). This is one of the few families entitled to supporters by ancient prescriptive right.

15. Sir Piers Edgcumbe, *Gu. on a bend erms. cotised or, three boars' heads coupé arg. armed or*; Edgcumbe: *imp. Or a bend betw. six martlets sa.*; Luttrell. Sir Piers Edgcumbe, son and heir of Sir Richard Edgcumbe, of Mount Edgcumbe, sometime M.P. for Plymouth, by his wife Elizabeth, daughter of John Tregian, of Golden, Esq. Sir Piers Edgcumbe was one of those to whom a commission was issued in 1590 to fit out and equip a fleet for the discovery of land in the Antarctic Sea; and was also M.P. for Cornwall and Devon, and High Sheriff for the latter county. He married Margaret, daughter of Sir Andrew Luttrell, of Dunster Castle, by whom he had issue five sons and four daughters. Of these Sir Richard Edgcumbe was ancestor of the present Earl of Mount Edgcumbe, who, through his grandmother, Sophia Hobart, third daughter and co-heir of John, Earl of Buckingham, and wife of Richard, second Earl of Mount Edgcumbe, is one of the representatives of Sir John Maynard. This Sir John Maynard, son of Alexander Maynard, of Tavistock (a younger son of the family of Maynard, of Sherford, near Kingsbridge), was born there in 1602. He became a lawyer of some note, and tried to correct what was wrong in both parties during the troubles between the King and Parliament. He was appointed King's Serjeant 9th Nov., 1660. Sir John was for some time member of Parliament for Plymouth, and also sat for Totnes and Beeralston. He was appointed by Elizeus Hele one of the trustees for his charitable bequests to Plymouth. Sir John Maynard married three times, his third wife being a daughter of Ambrose Upton.

16. Glanville, *Az. three saltires or*. Members of this family have for a long period been more or less closely connected with Plymouth. Sir John Glanville, third son of John Glanville, of Tavistock, became Chief Justice of the Common Pleas in 1598, and died at his residence, the Abbey, at Tavistock, 27th July, 1600. His second son, Sir John Glanville, Serjeant-at-law, was member of Parliament for and recorder of Plymouth. He died in 1661, and was buried at Broad Hinton, in Wilts, where he had purchased a seat. Joseph Glanville, born in 1636, at Plymouth, of which town his father was a merchant, became chaplain to King Charles II. He was an early member of the Royal Society; wrote several works; and died in 1680. A full account of the Glanvilles will be found in Prince's *Worthies of Devon*.

17. Elizeus Hele, *Gu. a bend lozengy erm., an annulet arg. for diff.: imp. per fess, in chief, Az. a lion ramp. or, within an orle of escallop shells of the second*; Hender: *in base, Gu. three bends vaire*; Bray. He was the eldest of the two sons of Walter Hele, of Winston, in Brixton, by his wife Joane, daughter of Thomas Maynard, of Brixton (this Walter being the fifth son of Nicholas Hele, of South Hele); he was born in Brixton, but had his chief residence at Fardel, in Cornwood, which his father had purchased. He married first, one of the daughters and co-heirs of John Hender, of Botreaux Castle, Esq.; and secondly, Alice, daughter and co-heir of Bray, of Northumberland, and relict of Nicholas Eveleigh, but having no surviving issue he left the greater part of his property to charities; among them an endowed school at Plymouth, the Grammar School at Plympton, and an annuity of £20 per annum to the minister of the parish of Brixton. He died at Exeter, 11th January, 1635, aged 70 years, and was buried on the north side of the choir of Exeter Cathedral, having appointed as his trustees Sir John Maynard, John Hele, Esq., and Elizeus Stert, Esq.

18. Sir Warwick Hele, *Quarterly: 1 & 4 Gu. a bend lozengy erm. in chief a fleur-de-lys arg. for diff.; Hele: 2 and 3 Arg. a fess az, fretty of the first betw. three fleur-de-lys of the second*; Warwick: *imp. per fess, in chief, Arg. a fess betw. three griffins' heads erased sa.*; Halse of Kenedon: *in base, Or three torteaux, in chief a label az. charged with nine bezants*; Courtenay. Sir Warwick Hele, was the eldest son of Sir John Hele, Serjeant-at-law, an eminent lawyer (who had purchased the estate of Wembury), by his wife Margaret, daughter and co-heir of Ellis Warwick, Esq., of Batsborow. Sir Warwick, who was High Sheriff of Devon, in seventeenth James I., and member of Parliament for Plymouth in 1597; married first, Mary, daughter of John Halse, of Kenedon, Esq., and relict of William Hawkins, Esq., of Plymouth; and secondly, Margaret, daughter of Sir William Courtenay, of Powderham Castle, but died without issue in January, 1625.

19. Sir William Strode, *Quarterly of four: 1 Arg. a chev. betw. three conies sa.*; Strode of Newnham: *2 Arg. three eagles displayed gu. crowned or*; Newnham: *3 Az. a bend eng. arg., cotised plain or, in chief a mullet of the second*; Fortescue: *4 Or three torteaux,*

& in chief a label az.; Courtenay: imp. per fess, in chief, Arg. a chev. gu. betw. three coots sa.; Southcote; in base, Az. three saltires or; Glanville. Sir William Strode was the eldest son of Richard Strode, of Newnham, Esq., by his wife Frances, daughter of Gregory, Lord Cromwell (a contemporary portrait of which lady was until lately at Newnham Park), by Elizabeth Seymour, sister of the Lord Protector, Edward Duke of Somerset, and of Queen Jane Seymour, third wife of King Henry VIII. He married first, Mary, daughter of Thomas Southcote, Esq., of Mohun's Ottery. This lady was the "Right Worshipful Ladie Mary Strode, of Newingham," to whom Sam. Hierom dedicated a little book of devotions, dated from Modbury the 10th of October, 1608. By her he had several children, of whom Sir Richard was member of Parliament for Plympton, and William member of Parliament for Beer Alston, in the Long Parliament, and was committed to the Tower; John, of Tavistock; Mary, married to Sir John Chudleigh, Knight; Elizabeth, married Edmund Speccott, brother of Sir John Speccot, Knight; Julian, married Sir John Davie, of Creedy Widger; Frances, married Sir Samuel Somaster, of Ponsford, Knight; Jane, married Sir Francis Drake, of Buckland, Baronet (her brother, Sir Richard Strode, married a sister of Sir John Drake, of Ash); Ursula, married Sir John Chichester, of Hall, Knight; Elizabeth, married Sir John Young, of Axminster. Sir William married secondly, Dyonisia, daughter of Sir John Glanville, of Tavistock, but by her had only one child, who died young. Sir William Strode, who was Recorder of Plymouth, 1611-20, died 27th June, 1637, aged 76, and is buried, with a large monument with effigies of himself, his wives, and children, in the Church of Plympton St. Mary; the inscription, with a long account of Sir William, is given in Prince's *Worthies of Devon*.

The following, from the Parish Registers of Plympton St. Mary, relate to Sir William and his two wives:

- 1617. Feb. 24. Mary, the wife of the Right Worshipful Sir William Strode, Knight, was buried.
- 1635. Sept. 16. Dionisea,¹ the wife of Sir William Strode, Knight, was buried.
- 1637. June 28. Sir William Strode, Knight, was buried.

¹ The christian name is left blank in the entry.

20. Sir John Skelton, *Az. a fess or, betw. three horses' heads coupé arg.: imp. Arg. a chev. sa. in chief a label of three points gu.*; Prideaux. Sir John Skelton was Governor of Plymouth, and is recorded by a very fine monument in St. Andrew Church; he married a Bridget Prideaux, but it does not appear what evidence there is for the statement that has been made that she was a daughter of Sir Peter Prideaux, and Lady Christian Grenville; there is certainly no authority for the quarterings of Beville and Prideaux, assigned by Gilbert to Beville Skelton; if Lady Skelton were a daughter of Sir Peter Prideaux she certainly could not convey to her children any right to the arms of Prideaux or Grenville, as a glance at the pedigrees of those families will clearly show; and it is worthy of note that no arms are given on the monument of Sir John Skelton for Dame Bridget Prideaux, his wife. The name of Prideaux has long been numerous in the south of Devon; and the arms given above for the wife of Sir John Skelton appear on a ledger stone, without any name or date, in the nave of St. Andrew Church, and also at Ermington; while in the adjoining parish of Harford, on his father's leasehold estate of Stowford, was born the learned John Prideaux, D.D., Bishop of Worcester, who when young sought the post of parish clerk of Ugborough. The fact of Sir John Skelton having given his sons the names of Beville and Grenville is no evidence that they were descended from those families, but rather of their father's admiration for the character of Sir Beville Grenville. This family of Skelton was seated in the east of Cornwall in the early part of the sixteenth century; they appear with the designation of gentlemen in the registers of Botus Fleming, in the seventeenth century, where they intermarried with the family of Crossman, whose pedigree was entered at the Heralds' Visitation, but that of Skelton is not recorded; and they had a grant of arms, *temp.* King Charles II., the right to which would of course be limited to the descendants of Sir John Skelton. The Registers of St. Andrew record the burial of Sir John Skelton, Knight, on the 8th January, 1672; his will was proved the same year in London (P.P.C. Page 39.)

21. Nicholas Slanning, *Arg. two pallets eng. gu., over all on a bend az. three griffins' heads erased or.: imp. Gu. a saltire vairé betw. twelve billets or.*; Champernoun. Nicholas Slanning, Esq., of Bickleigh, was the eldest son of John Slanning, Esq., by Jane,

daughter of William Cruwys, Esq., of Cruwys Morehard. He was member of Parliament for Plymouth in 1558, and married Margaret, daughter of Henry Champernoun, of Modbury, by his wife Catherine, daughter of Sir Richard Edgcumbe, of Mount Edgcumbe. By this lady Nicholas Slanning had several children, the eldest, Gamaliel, being the father of the well-known Royalist, Sir Nicholas Slanning. Nicholas Slanning died 8th April, 1583, and was buried in Bickleigh Church, where a monument, little of which now remains, was erected to him.

22. Sir William Morice, *Gu. a lion ramp. regard. or. imp. Arg. a chev. sa., in chief a label gu.*; Prideaux. Sir William Morice, Knight, was the son and heir of Jevan Morice, Chancellor of Exeter in 1594, by Mary, daughter of John Castle, of Ashbury. Sir William was born in the parish of St. Martin's, Exeter, 6th November, 1602, and was only four years old when his father died, leaving him very rich. His mother became the third wife of Sir Nicholas Prideaux, of Solden, whose monument remains in Padstow Church. In 1645 he was elected member of Parliament for Devon. In 1651 he was High Sheriff of Devon, having in that year settled at Werrington, which he had purchased from Sir Francis Drake. In March, 1659, he was constituted Governor of Plymouth, and was knighted in 1660. He was made one of the principal Secretaries of State and a Privy Councillor. He married Elizabeth, daughter of Humphry Prideaux, of Solden, Esq., by whom he had several children. The eldest, William, was member of Parliament for Plymouth, and was created a baronet in 1661. This title expired with his grandson, Sir William Morice, in 1750, whose sisters and coheirs were Catherine, married Sir John St. Aubyn, Bart.; and Barbara, married Sir John Molesworth, Bart.

23. Thomas Wise, *Sa. three chevronels erm.: imp. Sa. a cross arg. voided of the field, charged with four eagles disp. of the first*; Buller, of Shillingham. Thomas Wise, of Sydenham, married Mary, daughter of Richard Buller, of Shillingham, Esq., by his wife Margaret, daughter and coheir of Thomas Trethurfe, and relict of Edward Courtenay of Landrake, Esq. Both Thomas Wise and his wife are mentioned in the inquisition post-mortem taken on the death of her father, who died 9th December, 1556.

Sir Thomas Wise, son of the above, built a mansion in Stoke

Damerel, called after him "Mount Wise." He had by his wife, Margaret Stafford, a son, Thomas Wise, Esq., High Sheriff of Devon in 1638, whose son (by his wife, Lady Margaret Chichester), Sir Edward Wise, K.B., M.P., sold the manor of Stoke Damerel to Sir William Morice, from whom it passed by marriage to the St. Aubyn family. This Sir Edward married Lady Arabella St. John. The following entries relating to this family are taken from the Parish Registers of Stoke Damerel :

BAPTISMS.

1634. Feb. 10. William, son of Thomas Wyes, Esq.
 1635. May 12. Margere, daughter of Thomas Wyes, Esq.

BURIALS.

1622. April 17. Mr. Edward Wyes, son of the Right Worshipful Sir Thomas Wyes, Knight of the Honourable Order of the Bath.

24. Sir John Gayer, *Erm. a fleur-de-lys sa., on a chief of the second a mullet arg.: imp. Sa. on a chev. betw. three pistols or, as many roses gu. seeded and barbed ppr.*; Hopkins. Sir John Gayer, son of John Gayer, of Plymouth, by Margaret, daughter of Robert Trelawny, of Tideford, was a Royalist, merchant, and philanthropist, the story of whose escape from a lion while travelling with a caravan in the East, and his endowment of the "Lyon Sermon" to commemorate his providential delivery, are well known. Sir John was Sheriff of London in 1635, Lord Mayor in 1647, and died 20th July, 1649, having married Katherine, daughter of Samuel Hopkins of Coventry, Esq., by whom he had two sons and three daughters. Of the sons, John died *sine prole*; Sir Robert, made a Knight of the Bath 29th May, 1660, was Sheriff of Buckinghamshire in 1664, and died 14th June, 1702, having been twice married. His male descendants failed in the second generation, but male descendants of his family continue to flourish.

The following extracts from the Registers of St. Andrew relating to John Gayer and Margaret Trelawny, his wife, may not be out of place here :

BAPTISMS.

1586. April 7. Margaret, daughter of John Gere.
 1587. June 28. Richard, son of John Gere.
 1590. July 21. Grace, daughter of John Geyre.
 1592. April 19. Humphrey, son of Mr. John Geare.
 1593. Dec. 5. Robert, son of Mr. John Gayre.

WEDDINGS.

1583. May 12. John Geare and Margaret Trelawny.
 1594. Sept. 30. Mr. George Baron, Mayor, and Margaret Gayre, widow.

BURIALS.

1585. June 14. Christian, daughter of John Geare.
 1591. April 20. Grace, daughter of John Geere.
 1593. Oct. 7. Mr. John Gayer.
 1600. June 12. Mr. George Baron.

25. Sir Christopher Harris, *Sa. three crescents arg. : imp. Per. chev. az. and erm., in chief two bucks' heads caboshed or ;* Arscott. Sir Christopher Harris, only son and heir of William Harris, of Radford, to which estate he succeeded. He was Member of Parliament for Plymouth in 1584, knighted 7th June, 1609, was a Justice of the Peace, and Deputy-Lieutenant for Cornwall. He married, first, Barbara, daughter of John Arscott, of Dunsland. By her (who was buried at Plymstock, 22nd March, 1597) he had an only son, who died before him. Sir Christopher married, secondly, one of the Southcotes, but had no other issue. He died 25th January and was buried 27th same month, 1625, at Plymstock, when Radford went to the descendants of his only sister, Jane, who married John Harris, of Lanrest, and they still possess the estate.

26. Sir Winston Churchill, *Sa. a lion ramp. arg., on a canton of the second a cross gu. : imp. Arg. a wyvern wings displ. gu. ;* Drake. Sir Winston Churchill, son of John Churchill, of Mintern, in Devonshire, served in the Royal Army, and on the restoration of King Charles II. became Member of Parliament for Plymouth ; was knighted, recovered his family estates at Mintern, and had an augmentation to his arms (a canton with the cross of St. George). He was one of the earliest members of the Royal Society. Sir Winston married Elizabeth, daughter of Sir John Drake, of Ashe, by his wife, Helena, daughter of Lord Butler, of Bramfield. Sir Winston had, with other issue (who died young), John, the great Duke of Marlborough ; George, an eminent naval officer, died unmarried, and buried in Westminster Abbey ; Charles, a distinguished military officer, who left no issue ; and the well-known Arabella Churchill.

27. Right Hon. George Treby, *Sa. a lion ramp. arg. in chief three bezants: imp. Gu. a bend lozengy erm., on a mullet arg. a crescent sa. for diff.*; Hele. George Treby was the son of Sir George Treby, an eminent lawyer and judge, who was Member of Parliament for Plympton in 1678. He married Charity, daughter and co-heir of Roger Hele, of Holwell, and had issue a son, George, who died without issue, and three daughters; viz., Charity Treby, married to Paul Henry Ourry, Esq., Commissioner of the Navy, who succeeded to Goodamoor, and took the name and arms of Treby, from whose descendants that estate passed to the present owner, General Phillipp-Treby, of Goodamoor; Dorothy Treby, married Edward Drewe, Esq., and had issue; Anne Treby, who married Benjamin Hayes, Esq., and had a son, Treby Hele Hayes of Delamore, Esq.

28. John, Lord Boringdon, *Sa. a stag's head caboshed arg., betw. two flaunches of the second: imp. per fess, in chief, Az. a cross or, in the first quarter a rose arg.*; Hort: *in base, Vert a chev. betw. three stags pass. or*; Robinson. John Parker, Esq., son of John Parker, Esq., of North Molton and Boringdon, by his wife Catherine, daughter of John, Earl Powlett, was member of Parliament for Devon, and was created Baron Boringdon, of Boringdon, county Devon, 18th May, 1784. His lordship married, first, in 1763, Frances, daughter of Josiah Hort, Archbishop of Tuam, by whom he had no issue; and secondly, in 1769, Theresa, daughter of Thomas Robinson, first Lord Grantham (ancestor of Earl de Grey). By this lady he had with others John, second Lord Boringdon, created Earl of Morley, grandfather of the present Earl of Morley. His lordship died 27th April, 1788.

29. John Huxham, M.D., *Arg. a lion ramp. erms., on a chief gu, a cinquefoil betw. two cross crosslets or*, this coat was granted to Dr. Huxham in Nov., 1750: *imp. per fess, in chief, Arg. a cross betw. four eagles displ. sa.*; Corham: *in base, Az. three crescents or, as many hurts on a fess in chief of the second*; Harris, of Plymouth. Dr. Huxham is stated, on the authority of Mr. Polwhele, to have been the son of a butcher of Harberton, but it seems there is good reason for saying that he was born in Totnes in 1692. We cannot now verify this, but probably both statements are correct, Totnes being but two miles and a half from Harberton; while the registers of the latter parish contain numerous entries of the

name of Huxham. His father acquired a small estate in the parish of Staverton, and at his death left his son to the care of a Mr. Edgley, a dissenting minister of Totnes, who educated his ward for the medical profession, and introduced him to the Dissenters of Plymouth, where the death of Dr. Hankyn had made an opening. He was elected a Fellow of the Royal Society, and was the author of several medical works, some of which are in the library of this Society. Dr. Huxham married first at St. Budeaux, 10th May, 1717, Ellen Corham, daughter of William Corham, gent., by his wife Ellen, daughter of Thomas Rich, gent. (She was baptised at Plymstock, 27th Feb., 1689.) It may be worthy of notice that this lady's father, William Corham, gent., was married at Plymstock, 22nd March, 1680, to Ellen, daughter of Thomas Rich, gent., by his wife Ellen, daughter of William Bogan, gent., of Little Hempston, near Totnes, the marriage being recorded in the registers of Little Hempston, 8th Oct., 1655, as Thomas Rich, son of Thomas Rich, gent., of Plymstock, and Ellen, daughter of William Bogan, gent., of Gatcombe, in Little Hempston. Dr. Huxham married secondly at St. Andrew, Plymouth, 10th Oct., 1731, Elizabeth Harris, eldest daughter of John Harris, gent., and Ann his wife. This lady died 27th July, 1742, aged 46 years. John Huxham, M.D., F.R.S., died at Plymouth, and was buried at St. Andrew, 11th Aug., 1768. By his will, dated 26th Oct., 1767, he left certain money, together with a rent charge out of the land and houses he had purchased in Compton Gifford from John Morshead, Esq., and others, and lands and tenements in Plymstock, which he had purchased from Captain J. Ans, in trust to his good friends, John Herring, of the parish of Bickleigh, county Devon, apothecary, Charles Yonge, surgeon, and William Veale, apothecary, both of Plymouth, for the use and benefit of his daughter Ellen. This money he augmented by a codicil, 1st July, 1768; and after the payment of some legacies to his trustees and servants, he made his son, the Rev. John Corham Huxham, residuary legatee and executor, who proved the will in the Principal Probate Court, 10th Sept., 1768.

30. Edmund Pollexfen, of Kitley, *Quarterly arg. and az., in the first and fourth a lion ramp. gu.; Pollexfen: imp. per fess in chief, Az. three crescents or, in chief a fess of the second charged with as many hurts;* Harris, of Plymouth: *in base, Arg. a chev. sa. and*

in chief a label gu.; Prideaux. This Edmund Pollexfen was the last of this very ancient family, who held for a long period a good position in Plymouth and its immediate neighbourhood. The most distinguished member was Sir Henry Pollexfen, Attorney-General and Chief Justice of the King's Bench, who was knighted 5th March, 1688; while Mr. Pollexfen himself held no mean place in the legal profession which he practised in Plymouth, of which he was for some time Town Clerk. His will, proved in 1700 (P.P.C. Smith, 190), is a long and interesting document. It mentions his estates of Kitley, &c., and tin mines in Cornwall, an estate he had as his wife's dower, her mother Prideaux, assigns certain rooms at Kitley for the use of his wife, if she survives, with free access to and from them, use of gardens and orchard, with other matters. In many a South Devon church the arms of Pollexfen appear, while the parish registers record the names as gentlemen and esquires, and show their alliances with such families as Buller, Drake, Harris of Radford, Bastard, Treville, Hele, Crocker, Polwhele, and others. Ann, daughter and heiress of the above Edmund Pollexfen, married William Bastard, of Gerston, son of Sir William Bastard, and carried Kitley to that family. She erected a monument in Yealmpton Church to the memory of her father, who died in 1710.

The following entries from the Registers of St. Andrew relate to the above Edmund Pollexfen; viz.:

BAPTISMS.

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|-------|-------|-----|--|
| 1666. | Dec. | 6. | Ann, daughter of Edmund Pollexfen, Esq., and Ann, his wife. |
| 1668. | April | 17. | Elizabeth, daughter of Mr. Edmund and Mrs. Ann Pollexfen. |
| 1669. | Dec. | 13. | Petronell, daughter of Mr. Edmund and Mrs. Ann Pollexfen. |
| 1671. | Dec. | 5. | Edmund, son of Edmund Pollexfen, Esq., and Mrs. Ann, his wife. |
| 1672. | Feb. | 4. | John, son of Edmund Pollexfen and Mrs. Ann, his wife. |
| 1674. | Feb. | 24. | Nicholas, son of Edmund Pollexfen, Esq., and Mrs. Ann, his wife. |

WEDDING.

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|-------|------|-----|-----------------------------------|
| 1665. | Feb. | 21. | Edmund Pollexfen and Ann Harris.' |
|-------|------|-----|-----------------------------------|

BURIALS.

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|-------|------|-----|--|
| 1668. | May | 26. | Elizabeth, daughter of Mr. Edmund Pollexfen. |
| 1670. | Jan. | 8. | Petronell, of Mr. Edmund Pollexfen. |
| 1677. | Jan. | 4. | John, son of Mr. Edmund Pollexfen. |

31. Sir John Rogers, Bart., *Arg. a chev. gu. betw. three stags courant sa. attired, and gorged with ducal coronets or: imp. Az. a lion ramp. arg. crowned or, within a bord. of the second, charged with eight torteaux*; Henley. This Sir John Rogers was the son of Sir John Rogers, who acquired a considerable fortune as a merchant in Plymouth, which he represented in Parliament, and was created a Baronet, 21st Feb., 1698. His son, Sir John Rogers, the second baronet, the subject of this notice, was member of Parliament for and Recorder of Plymouth, offices which were held by several of his descendants. He married Mary, daughter of Sir Robert Henley, of The Grange, county Hants, by which lady he had issue seven sons and five daughters. Of the former two succeeded him; viz., Sir John Rogers, M.P. for Plymouth, d. s. p., and Sir Frederick Rogers, Recorder of Plymouth, ancestor of the present Lord Blachford.

We have now to consider some representatives of the mercantile families of Plymouth whose right to the arms they bore was beyond question, often younger sons of county families, or whose descendants have acquired a recognised position as such, and among several of which there existed a blood relationship.

32. John Amadas, *Az. a chev. erm. betw. three acorns slipped and leaved arg.*: imp. *Sa. a pheon arg.*; Nicol, of St. Tudy. John Amadas, son and heir of William Amadas by Katherine, daughter of Roger Budockshed (or Butshed), of Butshed. He was born about 1542, being aged eighteen at the death of his father, in 1560. He married Jane, daughter of John Nicol, of St. Tudy, and died 27th February, 1581, having had issue Mary, buried at St. Andrew, Plymouth, 18th January, 1581; Judith, married first at St. Andrew, 21st April, 1590, to William Sparke, and secondly 17th September, 1607, to Robert Trelawny; Susan, married at St. Andrew 21st September, 1684, to John Lemot; Isabell, married to Richard Gayer, of Plymouth; Francis Amadas, married Judith, daughter of Humphrey Fownes, of Plymouth, and had issue several children; John, named in the will of his brother-in-law, Robert Trelawny; Philip, eldest son and heir, aged sixteen years and more at the death of his father, died unmarried.

33. Robert Trelawny, *Arg. a chev. sa. betw. three oak-leaves vert., on the chev. a crescent for difference*: imp., *per fess, in chief, Sa. a*

chev. betw. three hands apaumée arg.; Mayne: *in base, Az. a chev. erm. betw. three acorns, slipped and leaved, arg.*; Amadas. Robert Trelawny, second son of Robert Trelawny, of Tideford, in St. Germans, Cornwall, by his wife Agnes, daughter of Thomas Spry, of Quethiock. He was a very prominent merchant of Plymouth, of which town he was Mayor 1608 and 1627. He died 7th, and was buried 19th December, 1627, at St. Andrew. He married twice, first Elizabeth, daughter of Alexander Mayne, of Exeter, by which lady, who was buried at St. Andrew, 28th October, 1602, he had several children, the eldest son being Robert Trelawny, a full account of whom was given to this Society by Mr. E. G. Bennett in his paper on "The Founders of Charles Church."¹ Robert Trelawny married, secondly, Judith, daughter of John Amadas of Plymouth, Esq., and relict of William Sparke, to whom he was married at St. Andrew, Plymouth, 19th September, 1607. She was buried just twenty years after at the same place, the register recording her burial on the 19th September, 1627. He had one son by this lady, John Trelawny, who was twice married. A very full pedigree of the Trelawny family will be found in Colonel Vivian's *Visitations of Cornwall*.

34. Stephen Trevill, *Or a cross eng. sa. over all a bend gu.: imp. Sa. on a chev. betw. three garbs or, as many torteaux*; Opie. Stephen Trevill, of Plymouth and of Rame, merchant, belonged to an old family, a branch of which settled in Plymouth and became opulent merchants. This Stephen Trevill resided in the parish of Rame, in which church there are monuments to the Trevill family. One of these, having the arms above (Trevill imp. Opie), commemorates Elizabeth, wife of Stephen Trevill, of Rame, merchant, who died 27th December, 1650. There is another very fine ledgerstone, but it is half-covered by pews; the arms of Trevill with a mullet, the difference of a third son, also the arms of Pollexfen on the sinister half of a shield, the remainder of which is hidden by the pews, which have left only enough of the inscription in sight to tell us that Mr. Stephen Trevill was a merchant of Plymouth. Richard Trevill, Esq., purchased Butshed, in St. Budeaux, from the Gorges; but this family did not long retain it. He died 26th August, 1648, leaving Butshed to his nephew, Richard Trevill,

¹ *Trans. Plym. Inst.* vol. viii. pp. 92-115.

Esq., whose son, William Trevill, erected a monument in St. Budeaux Church to the memory of his great uncle and others of his family, which monument still exists, and has been restored. Lethbridge Trevill was the last of the family at Budshed. He died 25th February, 1699.

The following register extracts relate to this family :

ST. ANDREW, PLYMOUTH.

BAPTISMS.

1582.	Jan.	26.	Martha, daughter of John Trevill.
1585.	Jan.	4.	Mary, daughter of John Trevill.
1620.	Oct.	29.	William, son of Stephen Trevill.
1623.	Aug.	31.	Ann, daughter of Stephen Trevill.
1625.	Aug.	21.	Stephen, son of Stephen Trevill.
1648.	Jan.	2.	Walsingham, son of Mr. Stephen Trevill.
1655.	Feb.	27.	Nicholas, son of Stephen Trevill, gent.

WEDDINGS.

1597.	April	4.	Thomas May and Joan Trevill.
1611.	May	8.	William Hele and Ann Trevill.
1624.	March	1.	Nicholas Bennett and Joane Trevill.
1635.	Feb.	22.	Peter Kekewich and Joan Trevill.
1636.	May	17.	John Ingram and Joan Trevill.
1647.	Dec.	30.	Mr. Stephen Trevill and Mrs. Jane Opie.

BURIALS.

1585.	Oct.	7.	John, son of John Trevill.
1589.	Dec.	15.	Robert, son of John Trevill.
1589.	March	1.	Mary, daughter of John Trevill.
1602.	April	5.	Eleanor, daughter of John Trevill.
1615.	July	13.	John, son of Stephen Trevill.
1629.	May	9.	Elizabeth, daughter of Stephen Trevill.
1642.	March	1.	Mrs. Thomasine, wife of Mr. Stephen Trevill.

RAME.

BAPTISMS.

1653.	Nov.	19.	Stephen, son of Mr. Stephen Trevill.
1654.	Nov.	28.	Jane, daughter of Mr. Stephen Trevill.
1656.	Sept.	29.	Ann, daughter of Mr. Stephen Trevill.

BURIALS.

1658.	May	22.	Andrew, son of Mr. Stephen Trevill.
1658.	Oct.	10.	Mrs. Jane Trevill.
1667.	Feb.	17.	Mr. William Trevill.

ST. BUDEAUX REGISTERS.

BAPTISMS.

1649. Dec. 18. William, son of Richard Trevill, Esq., and Mary, his wife.
 1672. April 18. Mary, daughter of William Trevill, Esq., and Joan, his wife.
 1673. June 12. Elizabeth, daughter of William Trevill, Esq., and Joan, his wife.
 1677. May 22. Lethbridge, son of William Trevill, Esq., of Buts-head, and Joan, his wife.
 1678. April 25. Joanna, daughter of William Trevill, and Joan, his wife.

WEDDINGS.

1696. Nov. 12. Mr. Edward Cross, of Exeter, gent., and Madam Elizabeth Trevill.
 1697. July 22. Thomas Stawell, gent., and Madam Mary Trevill.

BURIALS.

1648. Aug. 26. Richard Trevill, Esq.
 1662. April 4. Richard Trevill, Esq.
 1663. Feb. 25. Mary Trevill, gent.
 1665. Jan. 19. Richard Trevill, jun., Esq.
 1680. May 28. William Trevill, Esq., of Butshed.
 1699. Feb. 29. Lethbridge Trevill, Esq.

35. John Waddon, *Sa. a fess or: imp. Az. three eagles disp. arg.*; Fownes. John Waddon, merchant, of Plymouth, of which town he was Mayor in 1631-32 (son of John Waddon, Mayor in 1613-14, and Alice, his wife¹). He married, June 3rd, 1613,

¹ The will of this John Waddon was proved in London (P.P.C. Soame, 95) 10th November, 1620. In it he describes himself as John Waddon, of Plymouth, in the county of Devon, merchant, being sick in body but of sound mind. He wills and bequeaths, &c., to the governor of the house newly erected near the church of Plymouth toward the education of poor children, £10. To increasing the stock of the poor of Plymouth, £10. To the poor people of Plymouth, £5. To the poor of the parish of Antony, in Cornwall, 20s. To the poor of Blowe Fleming (Botus Fleming), in Cornwall, 20s. Names his now wife Alice Waddon; John Waddon, his son and heir, to have his lands, &c., in the parish of Antony; son, James Waddon, to have one messuage in Plymouth, "where Edmund Childe and John Corlim now dwell," late the land of John Phillipps, deceased; James also to have his brewhouse, and "all that Pallace in the Borough of Plymouth, near the old Conduit," and £300. Elizabeth, his daughter, £200; son-in-law Thomas Wolridge, 50s. for a ring; and Joan, his wife, £10; and their children each, £10. William Cann, his son-in-law, 50s. for a ring, and his wife, Margaret,

Prudence, daughter of Thomas Fownes, Esq., another prominent Plymouth merchant, by whom he had several children. The family of Waddon, which is a very ancient one, long continued in a good position, and one branch, that seated at Tonacombe, is now represented by the Rev. William Waddon Martyn, M.A., rector of Lifton, who possesses Tonacombe. The following extracts are from the Registers of St. Andrew :

BAPTISMS.

- 1585. April 30. John, son of John Waddon.
- 1587. July 26. Margaret, daughter of John Waddon.
- 1588. Jan. 21. Mary, daughter of John Waddon.
- 1590. Jan. 23. John, son of John Waddon.
- 1593. Jan. 17. James, son of John Waddon.
- 1598. July 7. James and Ann, son and daughter of John Waddon.
- 1619. Mar. 25. Prudence, daughter of John Waddon, jun.
- 1620. Feb. 28. Margaret, daughter of John Waddon, jun.
- 1622. May 29. Agnes, daughter of John Waddon.
- 1632. Jan. 23. James, son of Mr. James Waddon.
- 1633. Sept. 11. Nathaniel, son of Mr. John Waddon.
- 1634. Oct. 8. Emline, daughter of Mr. James and Mrs. Joane Waddon.
- 1637. Sept. 27. Benjamin, son of Mr. John Waddon and Mrs. Prudence, his wife.
- 1638. Dec. 26. Elizabeth, daughter of Mr. John Waddon and Mrs. Prudence, his wife.

WEDDINGS.

- 1638. Nov. 6. Oliver Ceely and Prudence Waddon.
- 1642. May 26. Timothy Allsope and Alice Waddon.

£10; to Thomas, Robert, and Matthew, their children, each £10. Thomas Leake, his son-in-law, 50s. for a ring; to his wife, Mary, £10; to Thomas and Alice, their children, £10 each. To John White, his son-in-law, 50s. for a ring; to his wife, Ann, £10; to the child the said Ann now goeth with, £10. To his daughter-in-law, Prudence, wife of John Waddon, his best and greatest silver-gilt cup; to John, Prudence, and Thomas, children of the said John and Prudence Waddon, £10 each. To Alice, daughter of the same, a tenement and garden near the churchyard of Plymouth, late in the occupation of Daniel Notherell, clerk, held on lease from the Mayor and Commonalty. To his daughter-in-law, Katherine, wife of Peter Waddon, his son, £20; to the said Peter, then in the East Indies, an annuity of £10, out of closes of land called Marshe or Myllpoole. Legacies to servants, Stephen Piers, Emet Brusye, wife of Philip Brusye, and Jonathan, their son. To Walter Glubb, Thomas Woodes, of Plymouth, surgeon, 20s. each. Alice, his wife, residuary legatee and executrix. Overseers—Son John, son-in-law William Cann, friend John Bound the elder, woollen draper, who is to have 40s. Dated 13th March, 1619.

BURIALS.

1620. Aug. 1. Mr. John Waddon.
 1634. July 1. Johanna, daughter of Mr. John Waddon.
 1634. Aug. 18. Emeline, daughter of Mr. John Waddon.
 1644. April 19. Prudence, wife of Mr. John Waddon.
 1644. Sept. 2. Mrs. Joane Waddon.

36. John Sparke, *Chequy or and vert, a bend erm.*: imp. *Sa. a cross or, cantoned with, in the first a Cornish chough, in the second a text T, in the third and fourth a crescent, all arg.*; Rashleigh. John Sparke, Esq., merchant, of Plymouth, married Deborah, daughter of Jonathan Rashleigh, Esq., of Fowey. He was the son of John Sparke, merchant, and twice Mayor of Plymouth, and Julian, his wife. In his will he describes himself as John Sparke, of Plymouth, Esq., being weak in body, &c. He bequeaths to the poor of Plymouth and Stoke Damerel, £5. To the Orphans' Aide in Plymouth, £3. To his daughter, Alice Sparke, an annuity of £25, out of lands and tenements in Plymouth not already conveyed to his son Jonathan Sparke, and out of all those lands and tenements commonly called Kennycot and Frennycot in the parish of Clawton, county Devon, lands and tenements, &c., called Millbrook in Stoke Damerel, until her marriage, to be paid quarterly by his executor, who was also to provide for his said daughter and a maid, for her fit and convenient "meet, drink, and lodging till she be married;" also 1000 marks as her marriage portion. To his sister, Jone Sparke, an annuity of £20 out of the said lands; also the same provision for a home for her and her maid, and £300 if she marry. To "every man-child of his grand-children now living £5 each, and to every woman-child of his grand-children £10 at the age of twenty-one years." To Debora Barons, £5; to Margery Dinham, £5. Legacies to servants Wedge, Robert Bickford, Richard Roberts, William Williams, John Tawly. To women-servants, 20s. each. His son and heir, Jonathan Sparke, residuary legatee and executor. Overseers—Jonathan Rashleigh, Esq., William Scawen, Esq., John Clement, Thomas Crampthorne, merchants, Thomas Stephens the younger, and William Symons, gent. Dated 16th March, 1639. Witnessed by the overseers and Humphrey Gayer, Humphrey Turner, John Langdon, and proved by the executor, 20th Nov., 1640. (P.P.C. Coventry, 141.) He died 27th March, 1640, aged 66, and his wife died 1st Nov., 1639, aged 57; and they are com-

memorated by a handsome monument, erected by their son, Jonathan Sparke, Esq. (who married Mary Bassett), and which is adorned with the arms of Sparke, Rashleigh, and Bassett. John Sparke, second son of the above John and Deborah Sparke, is buried with a monument in Fowey Church. This family has already been mentioned, and need not be further noticed here.

37. Nicholas Opie, *Sa. on a chev. betw. three garbs or, as many torteaux: imp. quarterly 1 and 4 Arg. on a mount vert, an oak tree ppr. fructed or; Wood: 2 and 3 Arg. a bull's head erased sa.; Carslake.* Nicholas Opie, or Opye, third son of Thomas Opie, of Bodmin (Mayor of that town in 1564; who purchased Penhargard in 1560, and had a grant of arms in 1573), born 1574. He settled in Plymouth, and married Jane, daughter of John Wood, of Hareston, in Brixton, Esq., by his wife, Elizabeth, daughter of George Northcote, of Calverley, and relict of — Fortescue, gent. They had issue several children, of whom Nicholas remained at Plymouth, and had several children, of whom Nicholas married Mary, daughter and co-heir of his cousin Thomas Opie, of Penhargard; Annie married Stephen Trevill, and Grace married John Battersby, both recorded on monuments in Rame Church. The name has become somewhat numerous and well-known in Cornwall and this neighbourhood. The following entries relating to this Nicholas and Jane Opie occur (with those of other members of the family) in the Registers of St. Andrew :

BAPTISMS.

- 1605. Mar. 16. Thomas, son of Nicholas Opie.
- 1608. July 9. John, son of Mr. Nicholas Opie.
- 1609. Sept. 21. Mary, daughter of Nicholas Opie, gent.
- 1619. June 30. Jane, daughter of Mr. Nicholas Opie.

BURIALS.

- 1620. May 20. Jane, daughter of Mr. Nicholas Opie.
- 1639. Feb. 12. Jane, wife of Mr. Nicholas Opie.
- 1640. April 22. Mr. Nicholas Opie, sen.

38. Sir James Bagge, *Paly bendy arg. and gu., on a chief or three cinquefoil az.: imp. Az. a bend eng. arg. plain cotised or, on the bend a crescent gu. for difference; Fortescue, of Buckland Filleigh.* This family of Bagge for several generations held a prominent position in the neighbourhood. James Bagge

was Mayor of Plymouth in 1595-6 and 1605-6, and his son, James Bagge, was member of Parliament for Plymouth from 1601-14, and they settled for a time at Saltram. The will of James Bagge, the father, was proved in London 24th March, 1625 (P.P.C. Clarke, 32). In it he is called James Bagge, of Plymouth, in the county of Devon, gent. He gives to the poor of Plymouth £5. To his wife four chambers in his dwelling-house in Plymouth—the chamber where he does usually lie, the chamber next without it, the porch chamber, “the chamber wherein my servant maids do lie”—as long as she will live there by herself, or with her children, with free access to and from them; also £30 in money or household goods. To his son, George Bagge, all his estate and right in a house or tenement in which John Gillame now dwells; also the house or tenement, &c., wherein ——— Eggeber now dwells, which he (James Bagge) holds by lease from the Mayor and Commonalty of Plymouth. To his daughter, Mary Bagge, £150. To daughter Elizabeth Bagge, £100. To daughter Oner Bagge, £100. And to each £5 a year, with food and lodging, if they will live with his executor; if not, £10 per annum. To his daughter, Margaret Deacon, a gold ring, value 26s. 8d. To Thomas Glanville a gold ring, value 26s. 8d. All his lands and tenements to his eldest son, James Bagge, who is executor. Overseers—his friends John Marten the elder, Henry Wallis, preacher, Francis Trelawnie, and Thomas Glanville. Dated 23rd March, 1623.

The following from the St. Andrew Parish Registers relate to this family :

BAPTISMS.

- 1591. Feb. 23. James, son of James Bagge.
- 1594. Dec. 4. Oliver, son of James Bagge.
- 1596. Nov. 13. Ferdinando, son of James Bagge.
- 1597. Dec. 21. Mary and Margaret, daughters of James Bagge.
- 1599. Feb. 23. Edward, son of Mr. James Bagge.
- 1600. Mar. 10. Margaret, daughter of Mr. James Bagge.
- 1602. Nov. 10. George, son of Mr. James Bagge.
- 1603. Nov. 16. Elizabeth, daughter of Mr. James Bagge.
- 1605. June 3. Honor, daughter of Mr. James Bagge.
- 1606. Sept. 21. Joane, daughter of Mr. James Bagge, Mayor.
- 1608. June 5. John, son of Mr. James Bagge.
- 1614. Sept. 18. Gartered, daughter of Mr. James Bagge.
- 1618. June 10. George, son of James Bagge, jun.
- 1619. Aug. 8. Amy, daughter of Mr. James Bagge, jun.

WEDDINGS.

1587. Jan. 15. James Bagge and Jone Myller.
 1625. Sept. 25. Mr. Nicholas Slanning and Gartered Bagge.
 1627. Oct. 24. Christopher Bagge and Ann Blake.

BURIALS.

1598. Dec. 28. Margaret, daughter of Mr. James Bagge.
 1600. Nov. 16. Edward, son of Mr. James Bagge.
 1606. Nov. 8. Joane, daughter of Mr. James Bagge.
 1608. July 24. John, son of Mr. James Bagge.
 1615. May 15. Ferdinando, son of Mr. James Bagge.
 1624. April 6. Mr. James Bagge.

PLYMPTON ST. MARY PARISH REGISTER.

BAPTISMS.

1615. Dec. 17. Jane, daughter of James Bagge, jun., gent.
 1616. Jan. 1. Amey, daughter of James Bagge, jun., gent.

WEDDINGS.

1630. Sept. 11. Mr. (*sic*) Kittelber and Mrs. Mary Bagge.
 1631. Nov. 10. John Glass, gent., and Mrs. Elizabeth Bagge.
 1634. Sept. 14. Henry Carie, Esq., and Mrs. Amy Bagge.

BURIAL.

1616. Mar. 11. Jane, daughter of James Bagge, jun., gent.

39. R. W. Coryndon, *Arg. a saltire gu. : imp. Barry of ten or and sa., in chief an annulet arg. for difference*; Selby. Robert Williams Coryndon was the son of Mr. George Coryndon (Mayor in 1832-3), and was born 11th October, 1802, at Stoke. He married (18th June, 1829) Jane Selby, fifth daughter of Thomas Selby, of Otford Castle, Kent, by whom he had four children.

Mr. Coryndon, who with his father were early associated with this Society, died at his residence, 10, Frankfort Street, 28th June, 1837, at the early age of thirty-five, and was buried in the family vault in Charles Church.

Having followed out the scheme of shields of the arms of representatives of warriors, statesmen, landholders, and merchants, more or less closely connected with this town, we will now proceed to give short notices of the persons commemorated by the shields of active members of this Institution, who, though they rest from all earthly work, have their memory perpetuated by the fruits of their labour. The series commences appropriately, and as of right with that of the founder.

40. Henry Woolcombe, Esq., F.S.A., *Quarterly: 1 Arg. three bars gu.; Woolcombe. 2 Arg. a chev. gu. betw. three peacocks' heads erased ppr.; Pitts, of Yealmpton. 3 Gu. a lion ramp., double queued erm.; Stokes. 4 Arg. three bears' paws coupé erect sa., within a bord. eng. of the second; Bedford: on the centre of the quarterings a martlet or, for diff.* Mr. Henry Woolcombe was the fourth son of Thomas Woolcombe, Esq., of Plymouth, by Priscilla his wife, daughter and co-heir of the Rev. John Bedford, M.A., vicar of Charles Church. He was born 1st May, and baptized 4th June, 1777, at Charles Church, Plymouth. He was an attorney-at-law, Recorder of Plymouth, and Mayor of the town in 1813. He was the originator of the Plymouth Institution, in which he took an active interest, and of which he was long President; and the Society as incorporated is bound by its laws to commence its year and hold an anniversary meeting on the 1st of May in each year, by way of commemorating alike its foundation (in 1812) and the birthday of its founder. Mr. Woolcombe died unmarried in 1847.

41. Rev. Robert Lampen, M.A., *Arg. on a bend sa. three rams' heads caboshed of the field, horns or, in chief a crescent gu. for diff.: imp. Gu. three saltires arg.; Gandy.* The Rev. Robert Lampen, son of Robert Lampen and his wife Elizabeth, daughter of William Snow (second son of Henry, son of Henry Lampen and Barbara Renwell, married 9th January, 1719). He entered holy orders, was lecturer at St. Andrew Church, then incumbent of St. Andrew Chapel, and was appointed vicar of Probus 21st April, 1828; and died at The Sanctuary, Probus, 18th August, 1849. He married Elizabeth Score, daughter of the Rev. John Gandy, M.A., vicar of St. Andrew and prebendary of Exeter, by his second wife, Margaret Whitelocke. By this lady he had issue two daughters—Elizabeth Gandy Lampen and Margaret Whitelocke Lampen, both unmarried.

Mr. Lampen, beside holding various offices in this Society and being an active member of the first Building Committee, read various papers before the members as well as a discourse at the opening of the Athenæum, 4th February, 1819, printed in the Society's *Transactions*, 1830.

42. William Prance, Esq., *Arg. fretty az., over all a fess or;*

Prance : imp. *Or on a cross sa. five plates, all within a bord. eng. purp.*; Gribble. Mr. Prance was descended from a family settled since 21 Edward IV. in Northam, North Devon, according to the family account and pedigree produced, though the pedigree or arms do not appear in any printed collection. The authorities for the arms are some old seals on family deeds more than a century old.

Mr. Prance was born in 1783, and was educated for the bar, but did not proceed to that profession, having succeeded to an inheritance through his mother, a daughter of Courtenay Connell, Esq. In the year 1816 he married Sarah, daughter of Henry Gribble, Esq., of Barnstaple, banker. By this lady he had issue William Henry, Courtenay Connell, Charles Rooke, Emily Gribble, all of whom are married and have issue. He was a magistrate and alderman of Plymouth, and Mayor in 1842. He largely assisted the charitable and public institutions and companies of the town. He was one of the original founders (in 1832) of the Devon and Cornwall Bank, of which he was Chairman. He was an active member of the Plymouth Institution, of which he was Secretary and President. He died 22nd March, 1861, greatly esteemed and regretted.

43. Edward Moore, Esq., M.D., F.L.S., *Arg. three greyhounds courant sa., a fleur-de-lis of the last for diff.* Mr. Moore was the fifth son of Joseph Moore, Esq., of the Friary, by Elizabeth, daughter of John Steele, of South Milton, his wife. In 1815 he was admitted a member of the Royal College of Surgeons in London, in 1827 M.D. of Edinburgh, and afterwards F.L.S.

In his native town he filled many important offices. He was one of the founders, and for thirty-three years senior surgeon, of the Plymouth Royal Eye Infirmary, and for four years after the resignation of Dr. Butter its physician, and discharged his duties with great zeal and skill.

The Plymouth Institution also owes much to his exertions. He was Secretary for many years, and also occupied the President's chair; while its Museum is largely indebted to his donations. He was a magistrate for the Borough of Plymouth, and a Director of the Devon and Cornwall Bank, as well as of the Cemetery Company from its formation. He died, unmarried, at his residence, Athenæum Terrace, 24th July, 1858.

44. Robert Were Fox, Esq., F.R.S., &c., *Erm. on a chev. az. three foxes' heads erased or, a bord. fleury counter fleurette of the second, on a canton of the last a drinking-cup of the third charged with a rose gu., from the cup three fleur-de-lis gold* : imp. *Arg. a chev. betw. three crosses patée gu.* ; Barclay. Robert Were Fox was the eldest son of Robert Were Fox, Esq., of Falmouth, by his wife Elizabeth, daughter of Joseph Tregelles, of Falmouth, and was born 26th April, 1789. He married, in 1814, Maria, fourth daughter of Robert Barclay, Esq., of Bury Hill, Surrey, by whom he had one son, Robert Were Fox (who married Jane Gurney Backhouse, and left four sons and one daughter), and two daughters. He died 25th July, 1877, his wife having died in 1858.

In this short notice it is impossible to do more than mention the high stand Mr. Fox took in scientific matters, and refer those interested to the sketch of his life by Mr. J. H. Collins, F.G.S., &c., in which is a long list of his writings.

15. Rev. Edward Beauchamp St. John, M.A., *Quarterly* : 1 *Arg. on a chief gu. two mullets or* ; St. John. 2 *Gu. a fess betw. six martlets or* ; Beauchamp. 3 *Or two bars gamelles and in chief a lion pass. gard. gu.* ; Tregoeze. 4 *Quarterly erm. and gu., on the centre a crescent az. for diff.* ; Stanhope. *On the centre a mullet az. for diff.* : imp. *per fess, in chief, Arg. three horses' heads erased sa. a chief gu.* ; Slade : *in base, Erm. three gadflies gu.* ; Gwatkin. The Rev. E. B. St. John was the eldest son of George St. John (third son of John, eleventh Lord St. John), by his wife Lavinia, daughter of William Breton Wolstenholme, Esq. He was born 26th March, 1795, entered holy orders, was for some time at Plymouth, and then rector of Ideford, Devon. He married first, in 1820, Jane, daughter of James Slade, Esq., by whom (who died in 1831) he had Henry Beauchamp Trefusis, born in 1822, and died in 1845 ; St. Andrew, born in 1827, and died in 1854 ; Lavinia Barbara, married 15th November, 1843, to John James Wynne, Esq., R.M. ; Laura ; Jane, married 28th October, 1849, to Samuel Arthur Walker, Esq. ; Eliza ; Matilda, married 24th May, 1855, to Captain (now Major-General) Edward Luddington Scott, of Plympton, South Devon, third son of the late Robert Scott, Esq., of Outlands, near Plymouth ; his first wife dying, the Rev. E. B. St. John married secondly, in 1844, Mary, fourth daughter of Robert Lovell Gwatkin, Esq., of Killiow, Cornwall,

and niece of Sir Joshua Reynolds, but had no other issue, and died April 4th, 1856.

This notice would be incomplete, forming part as it does of an heraldic paper, if it did not give the blazon of the splendid armorial book-plate of Mr. St. John. Within a square shield, surrounded with an ornamental bordure, we find marshalled the arms of sixty families whose blood flowed in the veins of Mr. St. John, and of whom he was one of the representatives through daughters who were heiresses or co-heiresses; viz.: 1 Arg. on a chief gu. two mullets or, pierced of the field. 2 Arg. a fesse betw. six cinquefoil gu. 3 Az. a bend arg. cotised or, betw. six martlets of the third. 4 Chequy or and az. a fesse erm. 5 Gu. three chevronels arg. 6 Erm. on a fesse az. three crosses flory arg. 7 Arg. a lion ramp. purp., on its shoulder a cross pattee of the first. 8 Gu. on a fesse betw. six martlets or, a mullet sa. for difference. 9 Per pale or and gu., three roundels counterchanged. 10 Arg. two bars gu. 11 Lozengy or and az. on a bord. gu. ten bezants. 12 Chequy or and az. a chev. erm. 13 Gu. a cinquefoil arg. 14 Gu. two bars or. 15 Arg. a fesse sa. betw. three crescents gu. 16 Erm. a lion ramp. gu. crowned. 17 Az. a cross arg. betw. twelve billets or. 18 Quarterly or and gu. a bend of the last. 19 Paly of six arg. and az. on a bend gu. three eagles displ. or. 20 Or two bars gamelles and in chief a lion pass. gard. gu. 21 Arg. a fesse gu. betw. three estoils sa. 22 Arg. on a chev. betw. three demi-lions ramp. gu. three bezants. 23 Sa. a chev. betw. three leopards' faces or. 24 Az. three fish naiant in pale arg., over all fretty or. 25 Arg. on a bend gu. three martlets or. 26 Az. a griffin ramp. or. 27 Arg. a chev. vert betw. in chief two fleur-de-lis, and in base a torteaux. 28 Gu. a lion ramp. vair. 29 Gu. a fesse betw. six martlets or. 30 Per pale or and gu. three roundels counterchanged. 31 Arg. two bars gu. 32 Arg. on a fesse az. three fleur-de-lis. 33 Arg. a bend betw. six martlets gu. 34 Arg. a lion ramp. sa. 35 Gu. a fesse dancette betw. six crosses crosslet or. 36 Erm. two bars wavy gu. 37 Az. a fesse dancette betw. three garbs or. 38 Gu. seven mascles conjoined three, three and one or, in chief a label of three points of the last. 39 Az. a fesse dancette betw. three escallops or. 40 Gu. three fleur-de-lis arg., a chief vair. 41 Quarterly gu. and vair or and vert, a bend arg. 42 Gu. ten bezants, four, three, two, one. 43 Az. six garbs or, three, two, one. 44 Arg. three bulls' heads erased sa. 45 Az. a

bend. arg. cotised or betw. six mullets of the second pierced. 46 *Arg. three ravens sa.* 47 *Arg. a fesse dancette betw. three crescents gu.* 48 *Erm. a bend az.* 49 *Erm. on a chief indent gu. three escallops arg.* 50 *Or a pale gu. and a chief vert.* 51 *Quarterly erm. and gu. on the centre a crescent for diff.* 52 *Vert three greyhounds courant in pale or.* 53 *Sa. a bend betw. six crosses flory arg.* 54 *Arg. on a cross fleury az. five escallops of the first.* 55 *Arg. a cross fleury az.* 56 *Arg. three crosses eng. sa.* 57 *Quarterly or and gu., a bord. sa. bezantée.* 58 *Gu. an eagle disp. or, wings depressed.* 59 *Sa. three garbs arg.* 60 *Or a bend sa.* With three crests: 1 *On a mount a falcon rising, belled, and gorged with a coronet.* 2 *The collar of an ox-yoke.* 3 *An eagle displayed.* The names of the principal quarterings are: 1, St. John; 2, Umphraville; 3, Delabere; 4, Turberville; 6, Paveley; 7, Stury; 8, Beauchamp of Bletsoe; 9, Abtot; 10, Mauduyt; 11, Newborough; 12, Warwick; 13, Paganell; 14, Harcourt (?); 15, Patishull; 16, Bray; 19, Grandison; 20, Tregoze; 21, Eways; 22, Fisher; 23, Frowick; 24, Sturgeon; 25, Danvers; 29, Beauchamp; 30, Abtot; 31, Mauduyt; 33, Furnival (?); 34, Stapleton (?); 35, Engayne (?); 38, Quincy; 40, Palmes; 41, Peverell; 42, Zouche; 51, Stanhope; 52, Mallovyll; 54, Copley; 55, Copley; 57, Rochfort; 60, Manley. Motto, *Data fata secutus.*

46. William Soltau, M.B., *Per bend sinister az. and arg., in base three fleur-de-lis of the first, in chief three ears of corn on one stem or, in chief a mullet for diff.: imp. Quarterly indent sa. and az. a hawk close erm. belled or, on a perch of the last;* Hawker. William Soltau was the third son of George Soltau, of Little Efford, Esq., by his wife, Elizabeth Maria, daughter of William Symons, of Chaddlewood, Esq. He married Caroline Ann, daughter of William Henry Hawker, Esq., of Plymouth, by whom he had issue Mary Elizabeth, Emily, and Caroline. Dr. Soltau, who held a high position both socially and in his profession, died 30th July, 1864. His widow married, secondly, 14th February, 1868, Rev. Theophilus Bennett, M.A., only son of T. Bennett, Esq., of Bellwood, Templemore.

47. Rev. Samuel Rowe, M.A., *Quarterly: 1 and 4 Arg. a chev. az. betw. three trefoils per pale gu. and vert.; 2 and 3 Gu. three holy lambs couchant, with cross and banner arg.; on the centre*

a crescent for diff. Samuel Rowe, the second son of Benjamin and Mary Rowe, was born 11th November, 1793, in the manor-house of Sherford Barton, in the parish of Brixton, South Devon, in which parish a branch of the family had held property since the 10th Richard II. His ancestors were the Rowses of Lamerton. He was educated first at home, then at a small school at Plympton; afterwards at the Grammar School at Plympton, and finally at Cambridge. He commenced business as a bookseller and publisher in 1813, but afterwards took holy orders, being ordained priest in 1826. He was presented to St. Budeaux; on the completion of St. Paul's, Stonehouse, he became its first minister, but shortly after he was transferred to the older church of St. George. Here he remained until 1835, when he was elected vicar of Crediton, where he continued until his death. Mr. Rowe married, in 1829, Sydney Neale, only daughter of — Neale, M.D.

He was the author of a number of books. The work on which his reputation will beyond doubt rest, and by which he will be best known, is his *Perambulation of Dartmoor*. Mr. Rowe delivered no less than forty-two lectures before this Society.¹ He died 15th September, 1853.

48. Joseph Collier Cookworthy, M.D.—*Arg. a chev. betw. three cocks gu. : imp. Or three boars' heads erased gu., langued and tusked az.*; Urquhart—was the eldest son of Joseph Cookworthy, of Plymouth, by his second wife, Mary Robins. He married Jane, second daughter of John Urquhart, of Nairnshire, N.B., Captain H.M. 79th Foot, who died in 1884, by whom he had five sons and three daughters, of whom all except three died young. The second son, the Rev. Urquhart Cookworthy, is rector of Sandford Orcas, county Somerset. He married Elizabeth S. Bayley, daughter of James Bayley, Esq., J.P., of Willaston Hall, Cheshire, and Rumleigh, county Devon. The eldest daughter, Mary Frances, married Thomas Webster, Esq., Q.C. Dr. Cookworthy married secondly the widow of the Rev. John Lloyd Lugger, but had no further issue, and died in 1869, aged 77 years. He was the great nephew of William Cookworthy, the discoverer of china clay, and manufacturer of Plymouth china.

¹ See *Trans. Devon. Assoc.* vol. xiv. 1882, pp. 395–401.

49. Wm. Elford Leach, M.D., F.R.S., *Quarterly: 1 and 4 Erm. on a chief indent gu. three coronets or; 2 Per pale wavy arg. and sa., a lion ramp. gu; 3 Gu. three stirrups leathered or.* William Elford Leach, fourth son of George Leach, Esq., and his wife, Jenny, daughter of the Rev. Lancelot Elford, of Buckland, Devon, and sister of Sir William Elford, Bart., married 8th August, 1777. George Leach died 27th October, 1823, and his wife 14th May, 1822. William Elford Leach was born 2nd February, 1790. He entered the medical profession, became M.D., F.R.S., F.L.S., &c. He settled in London, and died in Italy unmarried. He had three brothers and a sister, who all died unmarried; and thus became extinct in the male line the descendants of Walter Leach and Margaret (Reade), his wife, who was a grandson of the Rev. John Leach, rector of Talland, canon of Exeter, archdeacon of Totnes, and at the time of his death, in May, 1613, chancellor of the Cathedral Church of Exeter. Dr. Leach contributed several very valuable papers to this Society, his specialty being entomology. Abstracts of some of his papers will be found in the volume of *Transactions*, 1830.

50. Edward Hearle Rodd, Esq., *Arg. two trefoil sa. on a chief of the last a mullet or, for diff.* Mr. Rodd was the third son of the Rev. Edward Rodd, D.D., by his wife Harriett, eldest daughter of Charles Rashleigh, Esq., of Duporth. He was born at St. Just in Roseland, of which his father, Dr. Rodd, was rector, 17th March, 1810; entered the legal profession, and was for some years town clerk of Penzance, in which town he died 25th January, 1880. He devoted himself especially to ornithology, in which study he acquired much reputation, and wrote a work on the birds of Cornwall and the Scilly Islands. His very fine collection of birds he left as an heirloom to Trebartha Hall. It is needless to say more here, as a fuller account of him will be found in the *Bibliotheca Cornubiensis* by Boase and Courtenay.

51. Edmund Lockyer, Esq., M.D., F.L.S., &c., *Quarterly: 1 and 4, Az. on a chev. arg. betw. three lions ramp. or, as many ants sa.; Lockyer. 2 & 3 Arg. three bends sa., on each as many roses of the first; Penrose. On an escutcheon of pretence; Gu. on a chev. arg. three crosses crosslet fitchee sa.; Braithwaite.* Mr. Lockyer was eldest son of Edmund Lockyer, Esq., J.P., of Plymouth (elder

brother of Thomas Lockyer, Esq., of Wembury), by his wife Eleanor, daughter of Francis Penrose, of Durian, in Cornwall, and was born 28th October, 1782. He married Elizabeth, daughter and co-heiress of Thomas Patrickson Braithwaite, R.N. (of the Braithwaites of the Brairs, county Westmoreland) by whom he had issue. Dr. Lockyer, who was one of the companions of Mr. Woolcombe in the formation of this Society, died in December, 1816, at the early age of thirty-four.

52. Sir Thomas Dyke Acland, Bart., F.R.S., *Quarterly: 1 Chequy arg. and sa., a fess gu. ; Acland. 2 Az. a bend eng. arg., betw. two cotises plain or ; Fortescue. 3 Arg. on a bend sa. three lions' heads erased of the first crowned or ; Wroth. 4 Or three cinquefoil sa. ; Dyke. On the centre the badge of a baronet: imp. Sa. within a bord. eng. an eagle with two heads displ. arg. ; Hoare.* He was the eldest son of Sir Thomas Dyke Acland, the ninth baronet, by his wife Henrietta Anne, only daughter of Sir Richard Hoare, Bart., of Stourhead, and half sister of the noted antiquary, Sir Richard Colt Hoare. Sir Thomas, who succeeded his father as the tenth baronet, married, 7th April, 1808, Lydia Elizabeth, only daughter of Henry Hoare, Esq., of Mitcham Grove, by whom he had seven sons and two daughters, the eldest son being the present Sir Thomas Dyke Acland, Bart.

53. Colonel Hamilton Smith, *Gu. on a chev. arg. betw. two cooper's hammers in chief and an anvil in base ppr., three horse-shoes sa. : imp. Arg. a cross gu. cantoned in the first and fourth two chevronels sa., in the second and third a lion of the last ; Mauger of Guernsey.* Lieut.-Colonel Charles Hamilton Smith, K.H., K.W., F.R.S., F.L.S., was born 26th December, 1776, in the (then) Austrian province of Flanders, of a Protestant family holding a good position in the province, and of partly British descent. At the age of nine he was sent to England under the protection of General Lloyd, the military historian, and placed at school near Richmond. On the outbreak of the revolutionary troubles he returned to Flanders, and continued his studies at the Engineer and Artillery School of Mechlin, and at Louvain. In 1794 he was introduced to the Earl of Moira, then with the British troops under the Duke of York in Flanders, and joined the 8th Light Dragoons, which commenced a military career of some dis-

tion. Space does not permit our following him through his military services and confidential missions, which would form a most interesting narrative. While thus actively engaged in the duties of his profession, which took him into various countries, he found time to make numerous drawings of costume, architecture, and natural objects; and it is these, and his scientific researches, that claim most notice as a member of this Institution. His labours in these directions are far too numerous and varied to be done anything like justice to in such a short notice as this necessarily is. Of his drawings, Colonel Smith communicated a general account in a letter to the President of this Society, printed in the volume of *Transactions* of 1830, where it occupies thirty-six pages; these drawings amounted to many thousands in number (all on atlas 4to paper), while his manuscript collections of notes, from his own observations and unpublished sources chiefly, occupy more than twenty thick volumes. The works of Sir Samuel Rush Meyrick on ancient costume and armour were largely indebted to Colonel Smith's pencil; as a naturalist he took even a higher position than as an antiquary. The works of Cuvier and Sir William Jardine, are indebted both to his pen and pencil; he was also the author of the elaborate article on "Natural History and Warfare," in the *Cyclopædia of Scriptural Knowledge*, edited by Dr. Kitto; nor does this exhaust the list of his published writings. Colonel Smith's whole collection and his own assistance were always readily placed at the disposal of all to whom they could be of any use—services which involved the consumption of much valuable time and not a little labour. On his retirement from active service Colonel Smith settled in Plymouth. He became, in 1824, a Fellow of the Royal Society; and in 1826 of the Linnæan Society. On the formation of the Devon and Cornwall Natural History Society he was elected President; and after its amalgamation into the Plymouth Institution, he held the same office in the united Societies. Colonel Smith married in 1808 Miss Mary Anne Mauger, daughter of Joseph Mauger, Esq., of Guernsey, by whom he had issue Charles Hamilton Smith, who settled in New South Wales, and died there, leaving a son and several daughters; Emma Hamilton Smith, of Crediton, unmarried; Eliza Hamilton, married 16th August, 1831, to Charles Cobley Whiteford, Esq., of Thornhill, Compton Gifford, Plymouth, and left issue; and Emily Hamilton, married to Mr. Edmund King, C.E., whom she survived,

and died without issue. Colonel Smith died 21st September, 1859, at his house in Park Street, and was buried near his wife in the churchyard of Pennycross.

54. James Cremer Bellamy, M.R.C.S., *Sa. on a bend cotised arg. three crescents of the first.* Mr. J. C. Bellamy was son of Dr. George Bellamy—a member of a family long connected with the town of Plymouth—by his wife, Mary, younger daughter of Peter Franklin Cremer, of Plymouth. With his brother, Peter Franklin Bellamy, he was brought up to the medical profession. The two had common scientific tastes, working zealously together in the investigation of the natural history of the Plymouth district, and collected a valuable anatomical museum, which is now in King's College, London. Mr. J. C. Bellamy was born in Plymouth, and practised as a surgeon at Yealmpton. He was an active member and office-bearer of the Devon and Cornwall Natural History Society, and of the Plymouth Institution; and our Museum is largely indebted to him. He wrote several works, the most important being the *Natural History of South Devon*, published in 1839; and the *Thousand Facts in the History of Devon and Cornwall*, published in 1850. He was the first discoverer of the glutton as a member of the English cavern fauna. He died May 12th, 1854, aged 41.

55. Sir Stephen Love Hammick, Bart., M.D., &c., &c., *Paly of four or and vert, a bord. erm. charged with seven hurts; on a chief az. a lion pass. arg.; with the badge of a baronet.* He was descended from a family long-seated in this neighbourhood. His father, Stephen Hammick, was an alderman of Plymouth, and his mother was Elizabeth Margaret, only child of John Love, Esq., of Devonport. Sir Stephen was an eminent physician, being a Fellow of the College of Surgeons, and a member of the Senate of the University of London from its formation. He was the first Surgeon of the Royal Naval Hospital at Stonehouse, and was created a Baronet for his professional services 25th July, 1834. Sir Stephen, who was an early member of the Plymouth Institution, was succeeded by his second son, the present Rev. Sir St. Vincent Love Hammick, Bart, M.A., Vicar of Milton Abbot, near Tavistock.

56. Rev. Richard Hennah, F.G.S., *Arg. three Cornish choughs sa. beaked and legged gu., on a chief az. a naval coronet betw. two crosses patée arg.* Mr. Hennah was the eldest son of the Rev. Richard Hennah, vicar of St. Austell. He was born at St. Austell 8th March, 1765, took holy orders, and was for some time chaplain of Plymouth Citadel. He was the first who established the fossiliferous character of the Plymouth limestones, and wrote an account of *The Lime Rocks of Plymouth*. He was long an esteemed member of the Plymouth Institution. He died the 26th March, 1846, having married and left issue.

57. Charles Hingston, M.D., of Plymouth, *Gu. an arm in armour, embowed, ppr., in the hand a Danish battle-axe arg., in chief a mullet of the last for diff.: imp. Erm. an anchor erect az. betw. three escallop shells gu., on a chief wavy of the last a naval coronet or*, Parker, of Harburn, county Warwick. Dr. Hingston was born in 1805, being the third son of Joseph Hingston, of Dodbrooke, near Kingsbridge, Esq., by his second wife Catherine Phillips Tregelles, daughter of Joseph Tregelles, of Falmouth. He married first in 1830 Mary, daughter of George Braithwaite, of Kendal, and by her had two daughters. He married secondly in 1837 Louisa Jane, daughter of Sir William George Parker, Bart., and had issue: (1) Charles Albert Hingston, M.D., of Plymouth; married, and has issue. (2) Ernest Alison Hingston; married, and has issue. (1) Louisa; died unmarried in 1858. (2) Charlotte Parker Hingston, married to W. F. Fox, Esq. (3) Fanny Catherine Hingston, married to Arthur J. Hill, Esq. (4) Clara Gertrude Hingston. (5) Sophia Elizabeth Hingston. Dr. Hingston, who held a high place, and was a prominent member of this Society, died 5th September, 1872.

58. Herbert Fortescue, Esq., M.R.C.S., *Az. a bend eng. arg. cotised plain or, in chief a mullet charged with a crescent for diff.: imp. Or two talbots pass. betw. as many flanches sa.; Aldham*. He was the eldest son of Robert Fortescue, surgeon, of Plymouth, and Ann, daughter of George Herbert, of Plymouth, banker. He was born 2nd Feb., 1805, and brought up to his father's profession, in conjunction with whom he practised in this town. He married Cecilia Reddie, daughter of Captain George Aldham, R.N., of Plymouth, and died 17th Nov., 1844, leaving

one child—William Crawford Fortescue—who married and left a large family.

Mr. Fortescue, who was a brother of the present John Faithful Fortescue, Esq., J.P., of Plymouth, was descended from the marriage of Hugh Fortescue, of Buckland Filleigh, with Elizabeth, daughter of Sir John Chichester, by Gertrude, daughter of Sir William Courtenay, of Powderham Castle.

59. James Yonge, M.D., *Quarterly: 1 Or six ogresses in fess betw. three lions salient gu. ; Yonge, of Puslinch. 2 Sa. a cross moline arg. ; Upton, of Puslinch. 3 Or a cross eng. sa. ; Mohun. 4 Per fess arg. and az. three chaplets counterchanged ; Duke. In the centre on a mullet gu. a martlet arg. for diff. : imp. Erminois, on a fess az. betw. three cranes ppr., a saltire betw. two cross crosslets fitchee or ; on a chief erm, a bend gu. charged with three guttes d'or, all inter two martlets sa. ; Crawley-Boevey.* He was the fourth son of the Rev. Duke Yonge, vicar of Cornwood, by his wife Catherine, daughter of Thomas Crawley-Boevey, Esq., of Flaxley Abbey, and sister of Sir Thomas Crawley-Boevey, Bart. He was born 11th March, 1793, took his B.A. degree at Exeter College, and graduated in medicine at Edinburgh. He settled in Plymouth about 1823, and married first 20th Feb., 1820, his cousin Margaret, youngest daughter of Sir Thomas Crawley-Boevey, Bart., of Flaxley Abbey, county Gloucester. By this lady, who died 22nd April, 1867, he had five children, who all died young. Dr. Yonge married secondly 26th August, 1868, Anna Susanna Couch, daughter of George Couch, Esq., of Ford, Devonport, but had no other issue, and died at his residence, The Crescent, Plymouth, 3rd January, 1870. Dr. Yonge held a prominent place in his profession, and was highly esteemed by his fellow-townsmen. Of this Society he was long an active member.

60. Thomas Julian Pode, Esq., *Az. on a chev. or betw. two eagles displ. in chief arg. and a lion's head erased of the second in base, three estoils gu.* Mr. Pode was the third son of William Pode, Esq., by his wife Jenny, daughter of Tubal Lewis, Esq., of Plymouth. He married, in April, 1831, Anne Duke, youngest daughter of the Rev. Duke Yonge, vicar of Cornwood, by whom he had issue John Duke Pode, who succeeded his uncle at Slade Hall, three other sons, and three daughters.

61. Col. George Montagu, *Quarterly: I. 1 and 2 Three lozenges conjoined in fesse gu. within a bord. sa.; Montagu. 2 and 3 Or an eagle displ. vert. beaked and legged gu.; Monthermer. II. Or a fesse betw. two chev. sa.; Baynard, of Lackham, county Wilts. III. Arg. three bulls' heads caboshed sa.; Walrond, of Dulford. IV. Az. three swans' necks erased arg.; Lucy.* Col. Montagu, of Knowle, county Devon, and Lackham, county Wilts, was the son of James Montagu, of Lackham, who was son of another James, whose father, James Montagu, of Lackham, was the eldest son of James Montagu, by his wife Mary, daughter and heiress of Sir Robert Baynard, of Lackham, county Wilts. This last James was the third son of Sir Henry Montagu, first Earl of Manchester, by his wife Katherine, daughter of Sir William Spencer, of Yarnton, county Oxford, third son of Sir John Spencer, of Althorp. George Montagu, of Knowle, was a lieut.-colonel in the army, and married Anne, daughter of William Courtenay, Esq., by whom he had George Conway Courtenay, who married and left issue, besides two daughters—Louisa Matilda, married Matthew Crawford; and Eleanora. Col. Montagu's great point was ornithology, upon which he was a great authority. Col. Montagu died 19th June, 1815.

62. Sir William Elford, Bart., *Quarterly: 1 and 4 Per pale wavy arg. and sa. a lion ramp. gu.; Elford. 2 and 3 Gu. three stirrups leathered or; Scudemore. In an escutcheon of pretence Arg. three talbots' heads erased az. betw. nine cross crosslets gu.; Hall. In chief the badge of a baronet; viz., Arg. a sinister hand coupéd gu.* Sir William Elford was the eldest son of the Rev. Lancelot Elford, vicar of Plympton, by his wife Grace, daughter of Alexander Wills, of Kingsbridge. He was created a baronet 26th November, 1800, and was the last male representative of a very ancient family in the south of Devon. He distinguished himself in scientific pursuits, and became a Fellow of the Royal Society and of the Linnæan Society. He married, first, Mary, daughter of the Rev. John Davis, of Plympton, by whom he had a son and daughter—Jonathan, who married, in 1810, Charlotte Wynne Aubrey, only daughter and heiress of John Wynne, of Abercuillith, county Denbigh, Esq., by Martha, daughter and co-heiress of Harcourt Aubrey, Esq., but died without issue; and Grace Chard Elford. Sir William married secondly Mrs. Walrond, relict of Col. Walrond,

and daughter and co-heiress of Humphrey Hall, Esq., of Manadon, but had no further issue. Sir William Elford was recorder of Plymouth, and died at the Priory, Totnes, 30th November, 1837, aged 89, and there is a small monument to his memory in the north aisle of Totnes Church.

Having completed the account of the shields by short notices of the various persons commemorated by them, it remains to briefly describe the shields in the pavilion of the Devon and Cornwall Archery Society at Manadon, pointing out errors as we proceed; and to notice those armorial seals in the Corporation archives that were not included in the former portion of this paper, together with any other examples of arms set up permanently that have not been treated of in the previous part of this account of our Local Heraldry.

The shields in the Archery Pavilion at Manadon form an interesting series, being those of the Ladies Paramount from 1847 downwards. With two or three exceptions, they appear to have been taken down and rehung without regard to any order. We will, therefore, take them chronologically.

1847. Lady West, *Quarterly: 1 and 4 Arg. a fesse dancettee sa.; West. 2 and 3 Az. (ought to be Gu.), three leopards' faces jessant de lis or; Cantelupe: imp. Quarterly: 1 and 4 Erm. three cats a mountain pass. gard. in pale (? Az.) Sa.; Adams. 2 and 3 Arg. on a pale sa. three towers of first.* Lady Mary Madeline West, wife of Sir Augustus West, M.D., Deputy Inspector General of Hospitals; sometime Physician to the King of Portugal.

1848. Lady Carew, *Or three lions pass. in pale sa. armed gu.: imp. Sa. a lion pass. arg. with the badge of a baronet.* This lady was Anne Frances, eldest daughter of Major-General Thomas William Taylor, C.B., of West Oghwell House, Lieut.-Governor of Royal Military College at Sandhurst, by his wife Anne Harvey, daughter of John Petrie, Esq., of Gatton, Surrey. She married 25th January, 1837, Sir Walter Palk Carew, Bart., of Haccombe, county Devon, by whom she had issue Walter Palk, Elizabeth Anne, and Beatrix.

1849. Hon. Mrs. Murrey, *Per pale, the dexter quarterly: 1 and 4 Az. three mullets arg. within a tressure flory counterflory or. 2 and 3 Gu., three crosses patée or*, Barclay of Belvair: imp. quarterly of four: 1 and 4 Or three bendlets az. on a chief of the last semée of fleur-de-lis of the first. 2 Az. fretty and semée of fleur-de-lis or. 3 Arg. a chev. betw. in chief two mullets and in base a crescent all gu. She was Emily, only child of Gerard de Vismes, fifth son of Phillippe, Comte de Vismes; married 28th June, 1810, to General Sir Henry Murrey, K.C.B., fourth son of David, second Earl of Mansfield, by whom she had issue three sons and as many daughters.

1850. Lady Yarde Buller, *Quarterly: 1 and 4 Sa. on a cross arg. quarterly pierced of the field, four eagles displ. of the first; Buller. 2 and 3 Arg. a chev. gu. betw. three water bougets sa.; Yarde: imp. Lozengy erm. and sa. a canton or; Patten.* This lady was Elizabeth, daughter of Thomas Wilson Patten, Esq., of Bank Hall, co. Lancaster, and married, 24th June, 1823, Sir John Yarde Buller, Bart. (afterwards Lord Churston), by whom she had a son and daughter. Lady Yarde Buller died 20th Feb., 1857.

1851. Mrs. Parlby, *Per pale, the dexter quarterly: 1 and 4 Arg. a parrot vert, beaked and legged gu.; Parlby. 2 Arg. three talbots' heads erased az. betw. nine cross crosslets gu.; Hall. 3 Arg. on a chief gu. two mullets or; St. John: imp. per fesse, in chief, Az. a fesse dancette betw. three griffins pass. or; Holder: in base, Arg. a bend eng. sa.; Radcliffe.* Emma Admonition, third daughter of the Rev. Walter Radcliffe, of Warleigh, by his wife Abby, sister of Sir Ralph Lopes, Bart. She married 6th May, 1845, to the Rev. John Hall-Parlby, M.A., J.P., of Manadon, as his second wife, his first wife (whose arms are in chief on the sinister side) being Emily Janetta, daughter of John Hooper Holder, Esq., of Stanton Lacy. The arms as painted are not quite correct. The talbots' heads in the coat of Hall should be az., not brown, as painted; and the coat of St. John should be omitted, as the Hon. Jane St. John, third daughter of John, tenth Lord St. John, of Bletsoe, who married Humphrey Hall, Esq., of Manadon, county Devon, and Goldings, county Herts, was not an heiress or co-heiress in heraldry, there being male descendants of her father living, among them the present Lord St. John. By his lady Mr. Hall had three

daughters, his coheiresses: Elizabeth, married first Colonel Maine Swete Walrond, and secondly Sir William Elford, Bart.; Jane, wife of Martin Wall, Esq.; and Lætitia married to John Alexander Parlby, Esq., and mother of the above Rev. J. Hall-Parlby. At Sampford Spiney the hatchment of Humphrey Hall has Hall impaling St. John, which is correct; and the hatchment of Colonel Walrond has Walrond with Hall (alone) on an escutcheon of pretence, also correct, and these coats are repeated on a floor slab there. The monument of Jane Martin Wall, in Pennycross Church, has the coat of Wall with Hall alone on an escutcheon of pretence; but the hatchment of her sister, Mrs. Parlby, has the coat of Parlby with an escutcheon of pretence with Hall quartering St. John, which, as we have shown above, is incorrect.

1852. Lady Rolt, *Gu. on a fesse arg. three martlets of the first*; Rolt; *An escutcheon of pretence quarterly: 1 and 4 Arg. three bars gamelles sa., in the first quarter a label for difference*; Caswell, *2 and 3 Arg. on a bend sa., three dolphins embowed of the field crowned or*; Rolt. Mary, daughter and heiress of Thomas Rolt, of Secombe Park, county Herts, married Timothy Caswell, Esq., LL.D. (second son of Sir George Caswell), and left a son, George Caswell, whose daughter and heiress, Anne, married, in 1824, Lieut.-Gen. Sir John Rolt, K.C.B. (who died in 1856), and was the Lady Rolt whose shield is here given, which shows the union of two distinct families of Rolt, and is correct, with the exception that a crescent, not a label, is the correct mark of difference in the coat of Caswell.

1853. Mrs. Mackworth Praed, *Quarterly: 1 Az. six mullets arg.*; Praed. *2 Per pale indented sa. and erm. on a chev. gu. five crosses pattee or*; Mackworth. *3 Gu. a bend betw. three martlets or. 4 Erm. on a chief gu., three lozenges or. On an escutcheon of pretence, quarterly: 1 and 4 Gu. a fesse or betw. three bezants*; Hayes. *2 Sa. a lion ramp. arg. collared or, in chief three bezants*; Treby. *3 Gu., a bend lozengy erm.*; Hele. This lady was the daughter and heir of Benjamin Hayes, Esq., of Delamore, and married Wm. Mackworth Praed, Esq.

1854. Lady Smith, *Arg. on a chev. gu., betw. in chief two martlets of the second, and in base an elephant statant ppr. on a mount*

vert., a fleur-de-lis inter two lions ramp. of the first ; in chief the Waterloo medal, inscribed "Wellington," "Waterloo," pendant by a ribbon issuing from the chief, gu. edged az. This lady was Donna Juana Maria de los Dolores de Leon, married in 1814 to General Sir Harry George Wakelyn Smith, G.C.B., created a baronet for services in India.

1855. Hon. Lady Lopes, *Quarterly: 1 and 4 Az. a chev. or, charged with three bars gamelles gu. betw. as many eagles rising of the second, on a chief of the last five lozenges conjoined in fesse of the first ; Lopes. 2 and 3 In a landscape field a fountain, thereout issuing a palm tree all ppr. ; Franco. On the centre the badge of a baronet: imp. Quarterly of six: 1 Sa. a cross arg. quarterly pierced of the field, thereon four eagles displ. of the first ; Buller. 2 Arg. a chev. gu. betw. three water bougets sa. ; Yarde. 3 Arg. a chev. sa. betw. three roses gu. 4 Arg. a chev. betw. three billets gu. ; Kelly. The colours of this coat are incorrectly reversed on the shield. 5 Or, on a bend sa. three horseshoes of the first ; Ferrers. 6 as the first. For the Hon. Anne Buller, daughter of Lord Churston, married 11th May, 1854, to Sir Massey Lopes, Bart.*

1856. Lady Parker, *Quarterly of six: 1 Gu. a chev. betw. three leopards' faces or ; 2 Per fess emb. or and sa., three stags pass. counterchanged (they should be goats). 3 Or a bend sa. 4 Sa. a bend betw. three spear-heads arg. 5 Arg. a fesse chequy az. and of the first, betw. three helmets of the second. 6 As the first ; imp. Vert an eagle displayed arg. ; in chief the badge of a baronet. This was put up for Frances Anne, youngest daughter of Sir Theophilus Biddulph, Bart., married, in 1810, to Admiral Sir William Parker, Bart., G.C.B., by whom she had two sons and six daughters.*

1857. Mrs. Granville, *Quarterly: 1 and 4 Gu. three clarions or organ rests or ; Grenville. 2 and 3 Or three cinquefoil gu., a chief vaire ; D'Ewes: imp. Sa. a buck's head caboshed betw. two flanches arg. ; Parker. This lady was Anne Catherine, youngest daughter of Admiral Sir Hyde Parker, Knight, and married 27th October, 1830, Bernard Granville, Esq., J.P., D.L., of Wellesbourne Hall (as his second wife), eldest son of Court Granville, who assumed the name of Granville in place of that of D'Ewes, in*

1826, being grandson of John D'Ewes, of Wellesbourne, county Warwick; and his wife, Anne, daughter and co-heir of Bernard Grenville, grandson of Sir Beville Grenville, of Stowe.

1858. Mrs. Eden, *Quarterly: 1 and 4 Gu. on a chev. arg. betw. three garbs or, banded vert, as many escallops sa. ; Eden. 2 Paly of six or and sa., a bend counterchanged ; Calvert. 3 Az. a cup or, with flames issuing therefrom ppr., betw. two chessrooks of the second ; Smith : imp. Arg. on a chev. az. (the chev. should be gu.) three cinquefoil or.* Mrs. Eden, for whom this shield was put up, was Louisa Anne, daughter of George Robert Eyres, Esq., of the county of Norfolk. She married 18th January, 1834, the late Lieut.-Gen. Eden (who died in 1862), fourth son of Sir Frederick Morton Eden, second baronet of Truir, by whom she had several children.

1859. Mrs. Strode, *Arg. a chev. betw. three conies couchant sa. : imp. Quarterly, per fesse indent., gu. and az. three lions ramp. arg.* This lady was Mary Hutchings, second daughter of Sir William Coles Medlycott, Bart., and was married 10th August, 1858, to George Sidney Strode, Esq., of Newnham Park, South Devon.

1860. Mrs. Hutchinson, *Per pale az. and gu., a lion ramp. gard. arg. armed gu., between eight cross crosslets or, on a canton of the second a mural coronet gu. : imp. Arg. a lion ramp. gu., on a chief sa. three escallops of the first.* Mrs. Hutchinson was a daughter of Dr. Russell, Head Master of Charterhouse, and wife of General Hutchinson.

1861. Lady Churston, *Quarterly: 1 and 4, Buller ; 2 and 3, Yarde, as in the shield of Lady Yarde Buller (see 1850) : imp., in chief, Lozengy erm. and sa. a canton or, Patten ; in base, Sa. three demi lions ramp. arg. langued gu. ; Newman.* Lady Churston, for whom this shield is put, was second daughter of Sir Robert William Newman, Bart., and married, 16th April, 1861, as his second wife, the first Lord Churston.

1862. The Hon. Mrs. Soltau-Symons, *Quarterly: 1 and 4 Per fesse indent sa. and arg. a pale and three trefoils slipped, one and two counterchanged ; Symons. 2 and 3 Per bend sinister az. and*

- *arg. in chief three ears of wheat conjoined on one stem or, in base as many fleur-de-lis of the first*; Soltau: *imp. Gu. an eagle displ. or, crowned arg., on a canton of the last an anchor erect sa.*; Graves. This lady was Adèle Isabella, second daughter of William Thomas, third Lord Graves, and married, 15th December, 1859, to George William Culme Soltau-Symons, Esq., of Chaddlewood, D.L., J.P., by whom she had George Algernon James, born 6th May, 1867; Adèle Frances, died 1st March, 1872; Milly Louisa Isabella; Evelyn Mary; and Constance Lena. Mrs. Soltau-Symons died 27th December, 1869. For remarks on the Symons' coat see the earlier part of this paper, in which the arms in the Guildhall windows are treated.

1863. Mrs. (after, Lady) Symonds, *Quarterly: 1 and 4 Sa. a dolphin embowed, in its mouth a fish, arg.; 2 Sa. a crescent betw. two mullets in pale arg.; 3 Arg. a chev. betw. three mascles gu.: imp. Arg. a chev. betw. three birds volant gu.* The lady commemorated by this shield was Mary, youngest daughter of Captain Thomas Wolrige, R.N., married, in 1856, to Admiral Sir Thomas Matthew Charles Symonds, K.C.B. (then Captain Symonds, she was his second wife, the first being Anna Maria Prestwood, daughter of Captain Edmund Heywood, R.N., C.B.), who was Admiral-Superintendent of Devonport Dockyard, 1862-6.

1864. Hon. Mrs. Lane, *Per pale gu. and az., three saltires arg.; Lane: imp. Gu. a lion pass. gard. in chief two chaplets of laurel or; on a chief of augmentation wavy, a representation of Algiers, with a British man-of-war before it, all ppr.; Pellew.* This shield was put up for Juliana Sarah, only daughter of Pownell Bastard, second Viscount Exmouth, who married, in 1836, Thomas Veale Lane, Esq., eldest son of the Rev. Richard Lane, of Coffleet, by whom she had four daughters.

1865. Viscountess Templetown, *Sa. a cross moline arg.: imp. Sa. three leopards' faces fessant as many fleur-de-lis arg.,* was the wife of George Frederick, third Viscount Templetown, a general in the army, to whom she was married 6th February, 1850, her father being General Sir Alexander Woodforde, G.C.B., G.C.M.G. The colouring of the arms is not quite correct apparently.

1866. Mrs. George Parker, *Quarterly of six as Lady Parker*, . 1856. *On an escutcheon of pretence quarterly of four grand quarters: I. and IV. quarterly, 1 Az. six mullets arg.; Praed. 2 Per pale indented sa. and erm. on a chev. gu. five crosses patee or; Mackworth. 3 Gu. a bend betw. six martlets or. 4 Erm. on a chev. gu. three bezants. II. and III., 1 and 4 Gu. a fess or betw. three bezants; Hayes. 2 Sa. a lion ramp. arg. collared or, in chief three bezants; Treby. 3 Gu. a bend lozengy erm.; Hele.* Mrs. George Parker was Anne Elizabeth, only child of William Mackworth Praed, Esq., of Delamore, and married, 25th April, 1857, Admiral George Parker, R.N., second son of Admiral Sir William Parker, Bart., G.C.B., and has issue.

1867. The Hon. Lady Spencer, *Per pale, the dexter per fesse, in chief, quarterly, 1 & 4 Arg. on a bend sa. three escallops of the field: 2 and 3 Gu. a fret or; in base, Sa. a lion ramp. arg. on a sinister canton of the second a cross of St. George.* This is altogether wrong, it should be: *Quarterly: 1 and 4 Quartered arg. and gu., in the second and third a fret or, over all on a bend sa. three escallops arg. 2 and 3 Sa. a lion ramp. arg., on a canton of the second a cross of St. George, on the centre of the whole a mullet on a crescent for diff. The sinister being, Quarterly: 1 and 4 Gyronny or and sa. 2 Arg. a galley sa., sails furled up of the last, flag and pennants flying gu. 3 Or a fesse chequy az. and arg.; on the centre point of the whole a heart gu. ensigned with an ancient crown gold; on a chief of honourable augmentation, arg. a mount vert inscribed AVA in letters of gold, thereon a Burmese stockade ppr. betw. a representation of the gold cross and clasp conferred on the first baronet of this family, on the dexter; on the sinister pendant by a ribbon gules fimbriated az. the badge of the Portuguese order of the Tower and Sword.* This lady was the wife of General the Hon. Sir Augustus Almerie Spencer, K.C.B., &c., &c., (first son of the first Lord Spencer, second son of the third Duke of Marlborough), and second daughter of Sir Archibald Campbell, Bart., G.C.B.

1868. Mrs. Taylor, Langdon Court, *Sa. a lion pass. arg.; Taylor: imp. Or three cinquefoil gu., should be, sa.; Dyke.* Mrs. Taylor was Caroline Anne, youngest daughter of Lieut.-Col. Geo. Hart Dyke (third son of Sir John Dixon Dyke, Bart.), by his wife

Louisa, third daughter of Sir William Lemon, Bart., she married 15th Aug. 1838, Richard Taylor, Esq., F.G.S., second son of John Taylor, Esq., of Coed Du. The arms of Taylor ought to have a crescent, and those of Dyke a mullet for difference.

1869. Lady Staveley, *Arg. on a chev. az. betw. three lozenges sa., as many stags' heads caboshed or* : imp. *Arg. in base on the sea, three persons in military uniform seated in an open boat, rowed by two sailors, all ppr., in fesse three erm. spots, on a chief or a mount vert, thereon an oak tree ppr. fructed or.* Susan Millicent, daughter of Charles William Minet, Esq., of Pier House, Dover, married, in 1864, General Sir Charles William Duncan Staveley, K.C.B., son of Lieut.-General Sir William Staveley, C.B.

1870. Lady Codrington, *Arg. a fess emb. gu. betw. three lions pass. sa., in chief the badge of a baronet* ; Codrington : imp. *per pale, the dexter Sa. a lion pass gard. or betw. three helmets arg.* ; Compton : *sinister Arg. an eagle displ. with two heads sa., on a chief vert. two mullets or* ; Aitchison. The coat of Aitchison should be omitted in this shield, being those of the lady's first husband. She was Catherine, eldest daughter of Henry Combe Compton, Esq., of The Manor House, Minstead, Hants, and married, first, 23rd April, 1838, Admiral Aitchison, of Shrubs Hill, Lyndhurst, and secondly (as his second wife, the first being Helen Jane, daughter of C. Webb Smith, Esq., from whom he was divorced in 1865), Admiral Sir Henry John Codrington, K.C.B., son of Admiral Sir Edward Codrington, G.C.B.

1871. Lady Graves, *Gu. an eagle displ. or, crowned arg., on a canton of the last an anchor sa.* : imp. *Arg. two rooks sa. regard. pierced through their necks by an arrow in fesse point to the sinister ppr.* This shield represents Katherine Fredrica, daughter of Sir T. W. C. Murdock, married, in 1870, to Clarence Edward, fourth Lord Graves.

1872. Mrs. Mudge, *Arg. a chev. betw. three cockatrices ppr.* : imp. *Az. three mullets or, on a chief of the last three pales gu., on the centre one a crescent arg. for difference.* For Jane, only daughter of George Frederick Dickson, Esq., of Abbots Reading, county Lancaster, and Hanover Terrace, Regent's Park, London, married, in April, 1844, to Zachary Mudge, Esq., of Sydney, Plympton, Devon.

1873. Admiral the Hon. Sir Henry Keppel, K.C.B., President, there being no Lady Paramount this year, *Gu. three escallop shells arg.*; there should be *a martlet in chief for difference*. Sir Henry Keppel was the fourth son of William Charles, 4th Earl of Albemarle.

1874. Mrs. Bastard, *Quarterly: 1 and 4 Or a chev. az.*; Bastard. *2 and 3 Quarterly arg. and az., in the first and fourth a lion ramp. gu.*; imp. *Or three eagles displ. purp.*; Rodney. For Frances Jane, daughter of the Hon. Mortimer Rodney, seventh son of George, second Lord Rodney, and married, 16th October, 1861, to Baldwin John Pollexfen Bastard, Esq., of Kitley.

1875. Mrs. Montague Bere, *Quarterly: 1 and 4 Arg. three bears' heads coupé sa., muzzled or, in chief a label gu. for difference of the eldest son. 2 and 3 Sa. three keys erect wards to the dexter arg.: imp. Quarterly of nine: 1 Sa. on a cross arg. quarterly pierced of the field, four eagles displ. of the first in chief a crescent gu. for diff. 2 Vaire, a bord gu. (should be, thereon eight cross crosslets or.). 3 Az. on a chev. betw. three cross crosslets arg., as many ogresses (should be torteaux). 4 Az. a stag's head caboshed arg. horns or. 5 Gu. a lion ramp. arg. crowned or. 6 Arg. a chev. gu. betw. three moorcocks sa. 7 Quarterly arg. and az. in the first and fourth a lion ramp. gu. 8 Arg. a chev. sa. 9 Per saltire az. and or, a lion ramp. counterchanged.* This lady was Cecil Henrietta, second daughter and eventual co-heiress of Captain Thomas Wentworth Buller, R.N., of Strete Raleigh, co. Devon, and married 12th August, 1852, to Montague Bere, Esq., Q.C., of Morebath, by whom she had five sons and six daughters.

1876. Mrs. Hole, *Az. an annulet betw. three lozenges or; imp. quarterly: 1 and 4; Hall. 2 and 3; Parlby.* (See 1852.) The impalement here is wrong, according to the monuments in Penny-cross Church, by which the impalement should be: *1 and 4 Arg. a parrot vert. beak and legs gu.; Parlby. 2 and 3 Arg. three talbots' heads erased az. betw. nine cross crosslets gu.; Hall.* The correct method in using a double name is to place the arms belonging to the first name in the first quarter; but this is generally regulated by direction in the patent or sign manual for taking the second name. Mrs. Hole being Emily Lætitia, second daughter by his first wife, of the Rev. J. Hall-Parlby, and wife of William Hole, Esq., J.P., of Parke, Devon.

1877. Mrs. Willes, *Arg. a chev. sa. betw. three mullets or* (this is wrong; the mullets ought to be gules); *imp. quarterly: 1 and 4 Arg. an oak tree eradicated ppr.; 2 and 3 Arg. a fesse betw. three martlets sa.* Matilda, daughter of William Joseph Lockwood, Esq., of Dews Hall, co. Essex, married, 16th May, 1855, to Captain Willes, afterwards Admiral Sir George Ommanny Willes, Knight. The impaled coat is incorrect; it should be: *1 Arg. a fesse betw. three martlets sa.; Lockwood. 2 Erm. on a bend eng. sa. three plates; Cutts. 3 Az. on a bend cotised arg. a lion pass. sa.; Tothill. 4 Or a fesse wavy betw. six billets sa.; Dowdeswell.*

1878. Mrs. Soltau-Symons, *Per pale, the dexter quarterly, as in the shield date, 1862; the sinister, per fesse, in chief, Arg. three foxes' heads coupéd ppr.* (they should be, *gu.*); *Todd: in base, Arg. on a cross gu. betw. four torteaux a lozenge or.* This shield is for Mary Elizabeth, only daughter of Lieutenant-Colonel F. W. Todd, and relict of St. John Coventry, Esq., of Upper Henbury, and The Knoll, Wimborne, Dorset. She married, secondly, as his second wife, the above G. W. Culme Soltau-Symons, of Chaddlewood, Esq., by whom she has issue. The impalement is incorrect; the coat in base has no right there, nor does there appear any reason for its introduction. It would be incorrect if it were the coat of the lady's first husband, which it is not. The impalement should be: *In chief Graves*, as in the 1862 shield, and *in base Todd*.

1879. Mrs. Farquhar, *Arg. a lion ramp. sa., betw. in chief two sinister coupéd gu., and in base a crescent az., on a chief an eastern fortification ppr., on it the name "Agra"; imp. Arg. a fesse erm. betw., in chief a chev. erm. inter in chief two bucks' heads caboshed ppr. and in base a rook sa. beaked and legged gu., in base of the fesse a buck pass. betw. three Cornish choughs all ppr.* The above is the coat as painted. It is evidently incorrect, but there is not information at hand by which to correct it.

1880. Mrs. Radcliffe of Warleigh, *Arg. a bend engrailed sa.; Radcliffe: imp. Arg. on a chev. eng. sa., betw. three stags courant ppr., as many crosses patee or; Ellacombe.* This lady is Hannah Charlotte, daughter of the Rev. Richard Ellacombe, rector of Alphington, county Devon, and married, 28th September, 1848,

the Rev. Walter Copleston Radcliffe, rector of Fonthill Gifford, son and heir of the Rev. Walter Radcliffe, of Warleigh. The arms of Radcliffe are incorrectly painted; they should be, *Arg. a bend eng. sa., on a canton of the first a horse's head couped of the second.*

1881. Mrs Wilson, *Sa. a wolf salient or, on a chief of the last a pale of the first betw. two pellets, and charged with a fleur-de-lis arg.: imp. Arg. a chev. betw. three billets gu.* This lady was Mary, daughter of Arthur Kelly, Esq., of Kelly, and married, 15th Feb., 1860, Joseph Edward Maitland Wilson, Esq., Captain (then Lieutenant), R.N., third son of Henry Wilson, Esq., of Stowlangtoft Hall, co. Suffolk. The coat of Wilson ought to have a mullet as the difference of a third son.

1882. Lady Francis Cecil. There are no arms given, only the crest; viz.; that of the Marquis of Exeter, with a crescent on the garb, for difference. For the wife of Lord Francis Horace Cecil, second son of the third Marquis of Exeter, and daughter of W. Cunliffe Brooks, Esq., M.P.

1883. Mrs. Bradshaw. The shield put up to commemorate this lady is altogether wrong. It is, *Quarterly: 1 and 4 Bradshaw right; 2 and 3 Arg. an eagle displ. sa., in chief a crescent or.* It should be: *Gu. two bends or; Bradshaw: imp. Sa. on a cross arg., quarterly, pierced of the field four eagles displayed of the first, in the first quarter a crescent or, for difference; Buller.* Being for Emmeline, daughter of the Rev. Richard Buller, Rector of Lanreath, married, 19th May, 1858, to Frank Bradshaw, of Lifton Park, co. Devon, Esq.

1884. Mrs. Henry Clark. This shield, like the one last mentioned, is so very incorrect that we will not blazon the coats as they stand. The shield is made quarterly of four: 1 Clark, of Efford Manor; 2 Phillips; 3 Treby; 4 Carpenter. The three last coats are incorrectly drawn. It is difficult, without a drawing, to make the errors of this shield quite plain to those who do not understand heraldic laws. The coats are arranged to represent an unmarried person, though the coats in the second and fourth quarters really belong to Mrs. Clark's family; but they are incorrectly drawn, and improperly marshalled. In the coat of Phillips a fancy scroll is introduced in place of the bordure

nebulee; the collar of the Treby lion is omitted; while the coat of Carpenter is made per pale plain instead of per pale indented. Correctly the shield should be: *Per pale, the dexter, Erm. a lion ramp. az., on a chief sa. a leopard's face arg. betw. two cross crosslets or*; Clark, of Efford Manor, or it might be quarterly, 1 Clark, as just given. 2 *Sa. a lion ramp. arg. collared vair az. and erm., in chief three bezants*; Treby. 3 *Gu. three griffins' heads erased arg., a chief erm.*; Snelling. 4 *Gu. a bend lozengy erm.: Hele; on the centre a crescent for diff. The sinister, Per pale indent or and az. an eagle displ., and in chief two roundels, all counter-changed*; Carpenter. Or this might be quarterly, 1 and 4 Carpenter, as just given. 2 and 3 *Per pale arg. and erminois a lion ramp. gu., within a bord. nebulee sa.*; Phillips. Mrs. Clark is a daughter of the late John Phillips Carpenter, of Mount Tavy, Esq., and his wife, Lucy, fourth daughter of the Rev. William and Lady Harriet Garnier, of Rookesbury Park, Hants, and married Henry Clark, Esq., of Efford Manor, son of Erving Clark, Esq., second son of William Clark, Esq., of Buckland Toussaints and Efford Manor.

Certain seals from the Corporation archives, for the opportunity of including which our thanks are due to Mr. R. N. Worth, we will describe as briefly as possible.

Addis, John, 1695. *A chev. betw. three crosses pattee*, crest indistinct, a wyvern or cockatrice apparently.

Allen, William, and also Samuel, 1691. *A cross potence*. Crest, *a demilion supporting a rudder*.

Allan, William, 1658. The arms of the Merchant Taylors of London.

Amadas. (*Az.*) *a chev. (erm.) betw. three acorns (slipped arg.)*, 1607, with the name of Thomas Crane.

Andrews. (*Arg.*) *on a bend cotised (sa.) three mullets (of the first)*. This coat occurs several times, in 1697 with the signature of Henry Hooke, Governor of the Citadel; in 1691 with that of Frederick Thomas; and in 1696 with names of Sarah, Susanna, and Elizabeth Eastlake.

Barker, Daniel, 1682. (*Or*) *a bend betw. six billets (sa.)*. This Daniel Barker was the son of John Barker, of Clotton, in Suffolk, and settled in Plymouth as a merchant, and was mayor of this town 1669-70, 1681-82. He died s.p., as did his only brother Richard Barker, of London, merchant, in 1683, when his two sisters became

his co-heiresses ; viz., Sarah, who married first Gilbert Symkin, of Alphraham, and secondly John Whitingham. By her first husband she had Ann, married Joseph Barnett, ob. s.p., and John Symkin, of Plymouth, who married Susanna Butler, and had Gilbert, ob. s.p., and Sarah married Henry Darell. (See Shields in the Workhouse, numbers 1 and 24.) Ann Barker, the other co-heir, married Hugh Merson, of Clotton, and left three daughters—Jane married William Eaton, of Rushton, Sarah died unmarried, and Anne married Abraham Jones. According to the Parish Register of Charles, Sarah, daughter of Mr. John and Susanna Symkin, baptized 7th Dec., 1693. Susanna, wife of John Symkin, buried 4th Oct., 1699. John Symkin, buried 27th April, 1719. Mrs. Sarah Darell, buried 30th June, 1761. Ann Eaton, buried 20th Feb., 1760.

Berry, Robert, 1680. *Erm. on a bend (az.) three fleur-de-lis (or).* He also used a fancy device in 1681.

Colwich, Henry, 1652. *Three chev. and in chief a label of as many points throughout.*

Crisp, Christopher, of London, 7th Aug., 1652. *On a chev. five horse-shoes, in chief a mullet for difference.* Mr. Samuel Crisp was buried at Charles Church 14th Sept., 1694.

Ceeley, Oliver. A very small seal, and indistinct. It appears to be quarterly of four : 1 *A chev. betw. three mullets* : 2 (?) : 3 *A chev (?)* : 4 *A fesse betw. six charges (?)*

Coode. (*Arg.*) *a chev. (gu.) betw. three moorcocks (sa.)*, 1652. With the name of Philip Williams.

Edgcumbe, Nicholas, 1690. *On a bend cotised, three boars' heads coupéd, in chief a crescent for difference.* In the Parish Register of St. Andrew we find, 8th Oct., 1668, Mr. Nicholas Edgcumbe and Elizabeth Tyacke married ; and again 8th July, 1679, Mr. Nicholas Edgcumbe and Mrs. Mary Holditch married. Buried, 15th Dec., 1669, Elizabeth, daughter of Mr. Nicholas Edgcumbe. Elizabeth, wife of Mr. Nicholas Edgcumbe, buried 3rd July, 1677.

Fowell, Edmund, 1634. *A chev. and on a chief three mullets.* These arms (*Arg. a chev. sa., on a chief gu. three mullets of the first*) appear on the mural monument in St. Andrew Church, of Jane, wife of this Edmund Fowell, and daughter of Sir Anthony Barker, of Sunninge, county Berks, Knt., who died 23rd May, 1640. It also appears on a floor slab in the same church, the only remaining inscription on which records Mr. Abraham Rowe, his wife, and sister.

Gennys, Nicholas, of Plymouth, grocer, 1696. (*Arg.*) *an eagle close (ppr ?)* Crest, *an eagle as in the arms.* The arms are on the monument of John Gennys, mayor of Launceston (in 1584-85,

1605-6, 1617-18, 1632-33, John Gennys was mayor) and Catherine his wife, in Launceston Church, date 1640, and also on the monument (imp. *Per fesse arg. & gu. three crescents counter-changed*) in Charles Church for John Gennys and Christiana his wife, daughter of John Docton, of Whitleigh, through which marriage Whitleigh passed to Gennys, and by the marriage of Edmund Henn with Mary, only daughter and heir of John Gennys, Esq., to the present Mr. Henn-Gennys, of Whitleigh Hall. Mr. Henn, on taking the name of Gennys in 1802, had a grant of the following coat, founded on the old coat of Gennys; viz., *Arg. a falcon close sa. bezantee, in its beak a branch of myrtle*. Mr. Nicholas Ginnis, buried 3rd Jan., 1717. Mr. Nicholas Gennys, buried 29th June, 1720.—*Vide* Par. Reg. St. Andrew.

Gubbs, Robert, 1681; Margaret Gubbs, 1688. (*Arg.*) *a pascal lamb pass. (ppr.)* Crest, *a demi-lion*. Robert Gubbs was mayor in 1639-40 and 1650-1. There does not appear to be any authority for the use of this coat, which is that used by the baronet family of Duntze, of Rockbere House, near Exeter, with the exception of the crest, the latter bearing *a mullet betw. two eagles' wings*. This crest might have been derived from that of the Baring family. This seems an earlier use of the coat than is recorded for Duntze.

Hall, Joseph, Bishop of Exeter, 1637. *Two keys in saltire, over them a sword erect; imp. a chev. betw. three talbots heads erased*. Also the latter coat alone with a demi talbot, for crest.

Hawkins, Sir Richard, 1604. (*Sa.*) *in base barry wavy of four (arg. & az.) thereon a lion pass. (or.) in chief three roundels (bezants) on a canton (of the fourth) an escallop shell betw. two palmers' staves (of the first)*. Crest, *a demi moor in chains (ppr.)*. This is the only impression of the seal of Sir Richard Hawkins known to exist.

Hele, Sir John, Serjeant-at-law, 36 Elizabeth. *A bend lozengy erm.* Crest, *on a cap of maintenance a falcon rising*.

Hele, Sampson, 1632. The same arms, with a crescent in chief for the difference of a second son. This coat was used with the same difference by Nicholas Hele as his seal in 1652. This Sampson was doubtless Sampson Hele, of Gnaton (son of Walter, son of John, second son of Nicholas Hele, of South Hele), High Sheriff of Devon 19 James I. He married Joan, eldest daughter of Sir John Glanville, Knight. (Joan, a sister of this Sampson, married Thomas Fownes, of Plymouth.) His grandson Sampson married Dorothy, daughter of Sir Francis Drake, Bart. There was also about this time a John Hele, of Blachford, in Cornwood, who married Prudence, daughter of John Drake, of Ivybridge (she remarried William Savery, of Slade), who probably lived first at Great Stert, in Cornwood; and his arms (*the bend lozengy erm.: imp. the fesse. wavy betw. two estoils of Drake: the crest, a falcon rising*

on a cap of dignity) are cut on the pillars of the old gateway ; but it is worthy of note that the sculptor, for the sake of uniformity, has taken the liberty to reverse the one on the left-hand pillar, making it Drake impaling Hele, and turned the cap and crest to face the visitor when entering. Nicholas Hele would appear to be Nicholas, second son of Thomas Hele, of Flete, in Holbeton, whose will was proved 22nd March, 1654.

Holman. (*Vert*) a chev. betw. three pheons (*or*), on the chev. a crescent for difference. This coat is used as a seal by John Martyn in 1648 ; but in 1656 John Martyn seals with *A chev. betw. three doves*, probably Searle, or Serrell, of Cornwall, *Arg. a chev. sa. betw. three doves ppr.*

Howard, George, 1652. *A bend betw. six cross crosslets fitchée.* Mr. John Howard was buried at Charles Church 10th October, 1694.

Hull, John, merchant, 1692. *On a chev. betw. three talbots' heads erased, a crescent for difference.* Hall and Hull, of Devon, and Hull, Cornwall. *Sa. (sometimes gu.) a chev. betw. three talbots' heads erased arg.*

Hughes, George, vicar of St. Andrew, 1646. *A lion ramp. within an orle of cinquefoil.* This looks like a variation of *Arg. a lion ramp. sa., armed & langued gu.* Hughes, of Gwerchas, a very ancient Welsh family.

Molesworth, John, 2 George I. *Vaire on a bord. eight cross crosslets.* This is Molesworth of Pencarrow.

Madock, John, 1659. *Two bars wavy, thereon a swan naiant ; crest a lion pass.* This family has already been noticed under the shields in the workhouse.

Nichols, Rev. Mathias, 18 James I. *On a bend cotised betw. six cross crosslets, three eagles displ. : imp. Per bend sinister erm. and erms. a lion ramp. (or).* See this noticed among the shields in the workhouse.

Opie. (*Sa.*) *on a chev. betw. three garbs (or), as many roundels (hurts), borne in a lozenge.* Used in 1714 by John Reade, gent. ; but he had previously used his own proper coat, for which see Reade.

Peard, Justinian, 1649. (*Or*) *two wolves pass. in pale (sa. their mouths embued gu.).* In the Parish Register of St. Andrew we find that Mr. Justinian Peard and Mrs. Elizabeth Jeffery were married 5th October, 1669. Justinian Peard was Mayor in 1644-5.

Phillips, William Davis, of Plymouth, Esq. *Per pale of three : 1 (Arg.) a lion ramp. (sa.) : 2 (Arg.) on a fesse (az.) betw. two chev. (gu.), three escallops (or) : 3 (Sa.) a fesse betw. three cinquefoil (or).* These arms are evidently incorrectly marshalled, as will appear from the following : Andrew Phillips, gent., married Elizabeth, daughter of William Davis ; and their son, William Davis Phillips, married Marina,

daughter of Sir Nicholas Trevanion, Knt., and had with other children William Davis Phillips, who as well as his father filled the office of Mayor of Plymouth.

Pollexfen, Edm. *Quarterly: in the first and fourth a lion ramp., and in the former a crescent for difference.* This is the Edm. Pollexfen, of Kitley, mentioned among the shields in the Museum.

Reade, John, 1708. (*Gu.*) *a saltire betw. four garbs (or).* This John Reade was of Burrington, gent., and by Dorothy, his wife, had an only child, Joan, who married Thomas Were, and had issue John, Mary, Johanna, and Dorothy, the latter of whom died 19th October, 1709, aged nine years. The son, John Were, died 24th January, 1778, leaving a daughter, Mary, wife of Richard Hall Clark of Halberton, Esq., through which marriage Burrington came to the present Richard Hall Clarke, Esq., D.L., J.P. The above John Reade, or Reede, was buried at Pennycross, and is mentioned on the monument of his son-in-law, Thomas Were, on which are the arms of Were, *Arg. on a bend az. betw. six cross crosslets fitchée gu. as many croziers or: imp. Rede, as above.*

Ridout, George, gent., 1716. *Per pale gu. & arg. a griffin segrant, counter-changed.* This George Ridout was born at Sherborne, county Dorset, and died in September, 1727; and is commemorated with his wife Jane, and some of his children and grandchildren, by a floor slab in Charles Church, on which are the same arms. The colours are given above from a book-plate mentioned in *Notes and Queries* (6th S. vol. v. p. 305). The marriage of the above George Ridout and Jane Dipford, on 29th August, 1695, is recorded in the Register of Charles Church with other entries relating to the family.

Roope, Nicholas, of Dartmouth, 1652. *A lion ramp. within an orle of pheons.* He was father-in-law to Mr. Henry Rexford, deputy-town clerk. These arms—viz., *Per pale, the dexter per fesse, in chief, Arg. three deebles ppr.; Deeble: in base, Arg. a saltire gu., on a chief of the second three boars' heads coupé of the first; Lavington: the sinister, Arg. a lion ramp. gu., within an orle of pheons az.; Roope.*—are in a lozenge on a hatchment, all black, with the date 1777. The hatchment is in memory of Mrs. Margaret Deeble, widow of Edward Deeble, Esq. She was buried, as appears by the Register, 8th August, 1777. James, son of Mr. James Roope, was baptised at Charles Church 24th February, 1659.

Sanders. In a lozenge, *Per chev. (arg. and sa.) three elephants' heads erased (counterchanged).* This is used by Richard Beach, surgeon, of Plymouth, 1750, but the arms are those of Sanders, and were formerly on a floor slab in the Church of St. Andrew recording John Saunders, of Plymouth, who died December, 1658; and in the Register of Charles Church we find that Mr. John Sanders and Mrs. Mary Teate were married 14th June, 1691.

Savery, Christopher, of Modbury, 1652. Crest only; viz., *On a mount a pine-tree, passing through a tun on its side all ppr.* This is really the crest of Servington, one of whose co-heiresses married nearly a century before this date Stephen Savery, of Totnes. The above Christopher Savery was of Shilston, son and heir of Sir Christopher Savery, who purchased Slade, Shilston, and Spriddlescombe. He married first Johanna, daughter and co-heir of N. Gilbert, afterwards Webber, of Bowringsleigh; and secondly Margaret, daughter of Warwick Hele, Esq., of Wembury (*vide* MS. ped.), but had issue by his first wife only.

Strelley, George, 1667. *Quarterly: 1 and 4 Paly of six (arg. and az.) 2 (Az.) an eagle disp. (arg.) 3 Or a fesse dancette (sa.). Crest a cock's head coupé (arg. comb and wattled gu. charged with two bars nebulée az.)* He is commemorated by a handsome mural monument in the Church of St. Andrew, Plymouth, erected by his widow, Mrs. Anne Strelley, which states that he was descended from the ancient family of Strelley, of Strelley, county Notts; that he was mayor of this town in 1667, and died in 1673, aged 63, leaving by his wife Anne, daughter of John St. Amand, Esq., of Mansfield, an only son and heir. The following are from the Registers of the above Church; viz., 16th February, 1670, Mr. George Strelley, and Mrs. Anne Saintamon married. 29th July, 1672, George, son of George Streely, Esq., baptised. 21st February, 1673, George Streely, Esq., buried.

Tom, William, 1681. *An escallop shell betw. three bucks' heads caboshed. Crest, a bird (Cornish chough), with an escallop in its beak.* William Tom was a grocer of Plymouth, and is mentioned as using a token with his name and arms on it by Mr. Worth in his *History of Plymouth*, p. 246. From the arms he appears to have belonged to the Cornish family of that name.

Treby, Peter, 1652. *A lion ramp. in chief three roundels. Crest, a demi-lion.* This family has for more than two centuries been settled in Plympton and the neighbourhood. This Peter Treby married Joan, daughter of John Snelling, Esq., of Chaddlewood, and had issue, with others, Sir George Treby, Knight, father of the Right. Hon. George Treby, last male of the family, who has been mentioned already.

Waddon, Thomas, of Tonacombe, Esq., 1728. *1 and 4 Sa. a fesse or. 2 and 3 Arg. a chev. betw. three bears' heads coupé sa. Crest, a bird rising.* This is attached to a long deed, made on Thomas Waddon succeeding his father, Thomas Waddon, late of Tonacombe, gentleman. In it are named the younger sons of the last-named Thomas, and their signatures are appended; viz., Edward Waddon, gentleman; William Waddon, clerk; Richard, Dennis, Isaac, and Granville Waddon, gentlemen. All seal with *sa. a fesse or.* Crest,

a bird rising, except William, who has the same arms and crest with a martlet in chief for difference. This Rev. William Waddon was vicar of Stratton, and rector of Cardinham, and married first Mary, daughter and co-heiress of John Bayly, of Eastleigh, in Launcells (mar. sett. dated 1715), by whom he had, with others (who ob. s.p.), Lætitia, married the Rev. Robert Martyn, vicar of Stratton, and rector of Luffincott. Their second son (the eldest ob. s.p.), Thomas Waddon Martyn, rector of Luffincott, and curate of Lifton, married his first cousin Mary, daughter and co-heiress of William Martyn, of Lifton, surgeon, by whom he had (*inter alia*) William Waddon Martyn, son and heir, who by Mary Smith, daughter of William Pattison, Esq., of New Water Haugh, Berwick, and Duporth, Cornwall, had a son and heir, William Waddon Martyn, B.A. rector of Lifton, the present (1885) possessor of Tonacombe, who married Maria Andrew, daughter of the late N. H. P. Lawrence, Esq., of Launceston, by whom he has several sons and daughters. A silver seal, apparently the one (without quartering or difference) used on the above occasion is in the possession of the above Rev. W. W. Martyn.

Yarde, Robert, of Lincoln's Inn, 1652. *A chev. betw. three water bougets.* This was an ancient Devonshire family, but no information is to hand by which this Robert can be identified. He might have been a son of John Yeard, gentleman, and Elizabeth Fownes, married at St. Andrew 28th April, 1602; and a brother of Edward Yeard, Esq., who was married at St. Andrew Church, 5th May, 1636, to Mrs. Elizabeth Fownes. A Robert Yard, Esq., was one of the masters in Chancery in 1730, whose daughter, Mary Yard, of St. George's, Hanover Square, was married, 27th January, 1729-30, at Westminster Abbey, to Thomas Tryon, son of William Tryon, Esq.

Yeo, William, 1656. *A chev. betw. three drakes.* Another old Devonshire family. The following extracts from the St. Andrew Registers relate to the above William Yeo: 9th October, 1649, Humphry, son of Mr. William Yeo, baptized; 30th October, 1653, Elizabeth, daughter of William Yeo, Esq., baptized; 20th June, 1655, James, son of William Yeo, Esq.; 27th October, 1658, Mary, daughter of William Yeo, Esq., baptized; 10th January, 1655, Thomas, son of William Yeo, Esq., buried; 23rd November, 1658, Mary, daughter of William Yeo, Esq., buried.

Yonge, James, 1690. Arms, those of the Barber Surgeons Company. This was James Yonge, F.R.S., the eminent surgeon, who was born in Plymouth, and was mayor in 1695. He was ancestor of the Yonges of Puslinch, having married, in 1671, Jane, daughter of Thomas Cramphorne, of Buckland Monachorum, by whom he had, with two other sons and six daughters, James, who married Mary, daughter and eventual heiress of John Upton, of Puslinch. This family have been already mentioned under the shields in the

museum of the Plymouth Institution. The following are from the Parish Register of St. Andrew :

Baptisms.

- 26 January, 1671, John, son of Mr. James and Mrs. Jane Younge.
 25 September, 1679, James, son of Mr. James and Mrs. Jane Young.
 8 February, 1680, Jane, daughter of Mr. James and Mrs. Jane Young.
 22 August, 1684, Catherine, daughter of Mr. James and Mrs. Jane Young.
 19 November, 1686, Thomas, son of Mr. James and Mrs. Jane Young.
 27 July, 1688, Catherine, daughter of Mr. James and Mrs. Jane Young.

Weddings.

- 27 December, 1694, Mr. Samuel Harris and Mrs. Johan Yonge.
 28th September, 1718, Mr. James Yong and Mrs. Mary Upton.

Burials.

- 4 August, 1697, Mr. John Younge.
 12 January, 1705, Penelope, daughter of Mr. James Young.
 2 May, 1707, Mr. Samuel Yonge.
 29 October, 1738, Mrs. Joan Yong.
 18 February, 1739, Mrs. Elizabeth Yong.

Beside the seals already given, there are several whose identification is doubtful, and others with merchants' marks or fancy devices. These have been entirely omitted; of the former the following are suggestions for their rightful owners' names; viz. (1) *Three escallops, on a chief as many crosses pattee fitchee*, probably Glenfleur, *Arg. three escallops gu., on a chief az. as many cross crosslets or*; the name of Thomas Yeabsley, 1667, is attached to the deed, but there does not appear any reason to believe it was his coat. It occurs in conjunction with the name of George Streelley, named above, on another deed about the same date. (2) *On a bend three eagles displ., crest a demi-eagle displ.*; attached to the name of William Cock, 1692, but query if Yearly of Devon, *Arg. on a bend sa. three eagles displ. or*, according to Sir J. B. Burke, though really the arms of the ancient family of Ernle or Earnley, of Sussex and Wilts. (3) *Two bars wavy betw. in chief two mullets and in base a crescent*, used by Thomas Love, merchant, 1612, who, to leave no doubt as to whose seal it was, had the letters T. L. cut between the bars; but the arms are not those of Love; *Sa. two bars arg. betw. in chief two mullets or, in base an annulet of the last*, is borne by the family of Spilman. (4) *On a bend plain, cotised indent, three crescents*. This is placed as the seal of John Wallace, of Plymouth, mercer, 1689. *Three crescents on a bend cotised (plain)* are borne with different colours by Cressey, Huxley, and Williams; the indented cotises might be a variation of one of these. (5) *Two lions pass. in chief a crescent for difference*; imp. *a buck's head caboshed*, appended to the name of William Langalley, 1729. Two lions pass. are borne by several families with variation in the colours. Thus Straunge, Strange, Petwardin, Felton, Kerkeby, Erdington, De Hervill, Lomery, De Brampton, St. Walery, Berkeley, Meryfeld, and with the lions crowned by Cremford and Dymock. (6) *A bend reguly*; attached to a deed with the

name of John Walker, 1700, *Arg. a bend reguly sa.*, are the arms of Saunton, and *Per bend, sa. and arg., a bend reguly counterchanged* is the coat of Genton. (7) *A lion ramp., crest, a sword point downwards betw. two towers with triple turrets.* This is used as the seal of Abraham Drake in 1714, but is not a coat of Drake; a number of families bear a lion rampant with different colours, but the crest is very peculiar. (8) *A fesse betw. six billets*, used by Francis Thomas, merchant, in 1666. This coat is borne with alteration of tinctures by several families, but not by the name of Thomas.

In bringing this paper to a close, it must unfortunately be with apologies for its incompleteness, arising from a want of opportunity to follow up original evidences, and for all its other imperfections, of which its author is only too conscious. Nevertheless, he believes that little, if any, heraldic evidence now existing and coming within the limits laid down has been overlooked. The pleasant duty only remains to acknowledge with thanks the lecturer's indebtedness to the Rev. Prebendary Wilkinson, D.D., vicar of St. Andrew, and to the Rev. G. F. Head, M.A., vicar of Charles, for free access to their respective registers for this and kindred purposes; and to Mr. W. P. H. White and Mr. Evans, clerks of those churches, for their courteous attention from time to time when making researches. Also to the clergymen of the various parishes whose registers are referred to, as well as to the many friends who have supplied personal information.

CORRIGENDA.

The arms described as on the Elizabethan house in Notte Street are not quite correct. The third quarter is Churchill, and not Perring, which belongs only to the elder line, and Harris only to the second or Belle Vue line. They consequently stand now—1 (*Arg.*) *billetee a bend (gu.)*; Bulteel. 2 (*Arg.*) *a chev. eng. (gu.) betw. three crows (ppr.)*; Crocker. 3 (*Sa.*) *a lion ramp. (arg.) debriused by a bendlet (gu.)*; Churchill. 4 (*Sa.*) *three crescents (arg.)*; Harris. On the centre of the quarterings a crescent for difference of a second son. The coat of Bulteel, though generally represented as a bend between ten billets, is described as "*Arg. billetee, and a bend gu.*" in the confirmation of arms and grant of crest, by Sir Edward Walker, Garter, to John Bulteel, Esq., in 1660. The crest and monograms of Bulteel and Daubeney have also been omitted. On the keystone of the entrance arch of the old Grammar School, now at the Athenæum, are the town arms—the saltire and four castles with the date 1658.

OUR LOCAL FLORA: ITS ECONOMIC ASPECT.

ABSTRACT OF LECTURE BY DOUGLAS D. DOBELL.

(Read 4th December, 1884.)

ALTHOUGH vegetable substances enter into our food, our clothing, and our habitations, and into the food of the animals whose flesh we eat, yet, owing to the great growth of commerce during the nineteenth century, our subject is of less intrinsic than historic importance. Many useful plants growing more or less plentifully wild would be also cultivated, could they not be imported for a less cost than the cost of cultivation at home. Concurrent with this lessened home cultivation of economic plants, in consequence of the extension of international trade, there has been by botanists during the same period a growing disinterest in the properties of plants.

To describe all the economic uses to which vegetables are applied, and the important trades dependent on this source, is impossible within the limits of this paper. Many persons owe their surnames to their ancestors' occupation in connection with vegetable materials. Of these are the family names: Cooper, Carpenter, Dyer, Tanner, Turner, Wheeler, Weaver, Barker, Hayward, Gardener, Miller, Bowyer.

The insufficiency of the classification prevalent until 200 years ago of plants according to their supposed qualities in medicine, or for other human wants was referred to; as also the assistance during the present century of chemistry to economic botany; and the generalization of the conservation of energy and matter, an outcome of Priestley's observation of the effect of a growing sprig of mint put into a glass of water and exposed to the rays of the sun. Economic botany, however subordinate scientifically to systematic botany, can yet, the lecturer proceeded, give some general truths concerning the uses of plants, the great producers. Thus every known cruciferous species being good for human food, or at

all events not harmful, every unknown cruciferous species is inferred to be of like quality ; yet in systematic botany the unknown species are placed in the order, not by reason of their qualities, but because of the ordinal external characteristics of six (four longer and two shorter) stamens, four deciduous petals, four deciduous sepals ; and stamens, petals, and sepals all hypogynous ; that is, found on dissection, all to be inserted directly on the flower stalk. In the Plymouth Flora we have 39 species of the Cruciferae, in Great Britain 66 species ; but throughout the world there are from 1200 to 1700 species. The discovery of one poisonous Crucifer would destroy the sequence and upset our induction.

Of the 876 plants comprised in the Plymouth Flora we can attribute economic value to about 173 only, or say one-fifth ; 101 being marked by Mr. Briggs as common, and 72 as rare.

Alluding to honey, then or a few weeks since fetching in Plymouth 2s. 3d. a quart, chiefly for human food, the lecturer said it was an important natural vegetable product, very similar to sugar, secreted by flowers in nectaries at the base of their carpels, petals, or sepals, and very attractive to insects. Honey partakes of the nature of plants whence derived. The honey of the Pontine Marshes is poisonous. The honey of *commerce* obtained by bees is never poisonous ; whence we may infer that whatever small insects may do, bees neglect, as far as possible, poisonous plants. In regard to our local species of the *Ranunculus* genus of plants, most of which are poisonous and have a nectary, it is very interesting to observe that *R. acris*, *R. repens*, *R. bulbosus*, *R. hirsutus*, *R. arvensis*, all being poisonous species, have a conspicuous scale over the nectary ; *R. Flammula* and *R. parviflorus*, also poisonous, have a rudimentary scale over the nectary ; but the aquatic species of the genus with no striking properties, and *R. auricomus* and *R. Ficaria* with good qualities, have no scale over the nectary. The scale over the nectary of the poisonous species may be a barrier to the proboscis of insects as large as bees. The unpleasant odour of the flowers of some poisonous plants, such as the *Aconitum* and *Digitalis*, would no doubt repel bees. Certainly some flowers attract more than others.

Leaving honey, we may say of plants that *Nasturtium officinale*, common watercress, native, very common by our small streams ; the many varieties of *Rubus fruticosus*, the common bramble or blackberry ; *Primula vulgaris*, the common primrose, which are

particularly luxuriant about Plymouth—are economically like De Quincey's Canadian wild strawberries, illustrating his logic of Political Economy: they have exchange value measureable by cost of labour of gathering and fetching, which labour of merely getting is here the whole cost of production, instead of, as in most forms of wealth, the least part. Virtually these gatherers produce without land, and certainly without capital, the whole business of their productions being merely distribution or cost of carriage, plus the cost of wearisome stooping. The watercress is well-known as a useful salad, having a pleasant pungent, bitterish taste, and esteemed as an anti-scorbutic. As to blackberries, as they fetch in the town as high a price as the commoner gooseberries, we may conclude either that the rent of the soil where the gooseberry is cultivated is low or else that the blackberry is more prized. *Primula vulgaris*, the common primrose, is only mentioned by reason of two facts; first, that many thousands of bunches are sent from here to the London market, one person at Devonport having had a contract for a million bunches this year; second, that it is said a living plant was carried over to Australia, where it was publicly exhibited in one of the large towns, and visited by thousands, so much was the memory of the flower cherished by those who had become exiles from their native land.

If we now consider the trees, we see they exist in abundance in the neighbourhood of Plymouth. There are woods at Polbathick, St. Germans, Cotehele, Warleigh, Butshead, Radford, Plym Valley, Saltram, Yealmpton, Cornwood, and Ivybridge; and long we may hope will they remain. The richness of the land in the South Hams and around Plymouth depends probably greatly on the prevalence of the woods and plantations. Woods protect orchards and fields. "Trees bordering on rivers, streams, lakes, or ponds, also preserve fish, in furnishing branchlets, twigs, and decaying vegetation for the numberless grubs, caterpillars, beetles, flies, and other insects which live on trees."

Humboldt, the great traveller and naturalist, summing up his observations in favour of the maintenance of woods, says, "The clearing of forests, the want of permanent springs, and the existence of torrents, are three phenomena closely connected together." Sir Richard Temple, reporting to the Government in consequence of the famine in India of 1877, laments the continued destruction of forests.

Numerous instances are recorded in support of the theory that Asiatic cholera increases as trees diminish. The Forestry Exhibition at Edinburgh this year, and Sir John Lubbock's appeal in this session of Parliament, to provide a school of forestry, are steps in the right direction.

So heedless and wasteful have been the American farmers towards timber, that the serious attention of the United States Government has been drawn to the subject, and strenuous efforts are being made to re-afforest the denuded tracts, either by private or public efforts, by sumptuary laws, like those in Japan, which ordain that no person is to cut down a tree without putting another in its place.

The farmer hates trees around his fields and in his hedgerows, under the idea that they harbour birds, and deprive crops of sunshine. To a certain extent they do. But birds keep down insects. Horses do not kill themselves by rushing headlong against hedges, as we may have heard of their doing against wire fences, unseen until felt; and woods and hedges are a shelter against winds, while fences are not. England stands pre-eminent as the greatest importer of timber, sending abroad £20,000,000 per annum in payment for timber and the great forest products—such as bark, paper, tar, pitch, wood-oils, resin, gum, &c. Timber indeed is one of the articles which has never decreased in value. Except perhaps that from the Baltic timber is regularly advancing.

Speaking of Baltic timber suggests Birch, a white wood used for a variety of purposes. When burnt it makes excellent charcoal. The twigs are made into brooms, &c.; the bark in some countries into hats, caps, and other articles of clothing; also into cups, boxes, baskets, &c. Its sap is so plentiful that a birch has been known to yield in one season a quantity of sap equal to its own weight, for fermentation into beer or wine. The bark of birch was used for writing on long before the invention of paper. It is the bark of the birch which gives the odour to the well-known Russian leather. Linnæus said barley should be sown when the leaves of the birch-tree began to appear. This was the result of observations by him in eighteen provinces of Sweden in the three years 1750–2. Even now, according to a recent writer—Mr. Du Chaillu—barley is the principal corn crop of Sweden, and birch the principal tree, the birch growing farther north than any other tree. We should therefore expect to find the birch, as a

Plymouth native, growing in our coldest localities ; and Mr. Briggs says it is so.

For usefulness, the Willows are important, their very Latin name, *Salix*, being given from their quick growth. Their growth has been proved to render marshes less unhealthy.

Salix fragilis, the crack willow, which is common with us, will grow to a height of 50 or 60 feet, and to a girth at the trunk of 13 to 15 feet. Its bark contains a large proportion of tanning matter, and from it, as well as some other species of willow, is obtained salicine, a salt resembling quinine. The wood is considered the most useful of the willow tribe, and when cultivated in plantations, from their quick growth, the poles yield a large profit. Other species common with us are *Salix triandra*, the almond-leaved willow, used for basket-work ; and *Salix caprea*, great sallow, useful in the bark as a tonic and for tanning, and as a whole for making fences.

Alnus glutinosa, common alder, is a native, and common in wet places ; the wood is soft, very durable, and little liable to warp. It is said to be the best wood for piles, for bridges, and for upholding river banks ; and also for burning into charcoal to make gunpowder. The bark of the young wood is used for tanning leather.

Quercus robur, common Oak, everybody knows to be very common. It is the most important of our forest trees. Of the two kinds—the sessile-fruited and the stalked-fruited, or pedunculate form—the timber of the sessile-fruited, less common with us than the other, is very inferior. A complete account of the uses of the British oak would be very lengthy. For any work liable to exposure, no wood equals that of the oak. Oak-bark is more used around Plymouth, and throughout England generally, for tanning than any other commodity. Oak-bark yields 5 or 6 per cent. of tannin ; all formed in the inner white layers, none in the epidermis or exterior.

Having just mentioned four trees—the birch, the crack willow, the alder, and the oak—whose bark contain the tannic acid which is found in all astringent vegetables, probably it will be convenient here to specify those other Dicotyledons which are noticeable for their tanning matter. No Monocotyledon, so far as the lecturer knows, yields tannic acid.

Sarothamnus scoparius, common Broom, we have, common. Its young green leaves and twigs are bitter and tonic ; and the bark,

containing a considerable quantity of tannic acid, is sometimes used for tanning leather. It is this tannic acid probably that causes the yellow flowers of broom to turn black when dried, and to differ in this respect from other yellow flowers, whose colour can generally be particularly well preserved. Branches of the larger shrubs were formerly much used for brooms or besoms.

Agrimonia eupatoria, common Agrimony, is very common ; and much gathered, Mr. Briggs says, by poor persons for medicinal purposes. The expressed juice of the common agrimony before it has flowered dyes woollen goods a nankeen colour ; but if the plant is gathered after the flowers are over, the colour is much darker. It contains tanning properties, and has been used in the process of tanning leather. The tannic acid in all genuine beer arises from hops, referred to presently.

Potentilla tormentilla, common Tormentil, common on the moors and dry banks ; and *Potentilla reptans*, creeping Tormentil, very common on banks, occurring on the Hoe, have roots which contain as much as 17 per cent. of tannic acid. It is said that 7 lbs. of the best oak-bark for tanning purposes are equal only to 1 lb. of tormentil roots, which are superior in this respect to everything but galls ; valonia, obtained from two different species of oak found in Asia Minor ; and catechu, from *Acacia catechu*, in India. Leather is tanned by the tormentil roots in the Hebrides and Orkney Islands, and in Lapland skins dyed of a red colour. It is said that because sheep are never attacked with the rot where the tormentil grows it should be planted in damp pastures where the disease is prevalent among flocks. It is one thing to suggest, another to carry out. The very fact that the tormentil's habitat is commons, moors, and undisturbed soil, exposed to the greatest amount of air and sunshine, where also sheep flourish best, seems to prove that where sheep do badly the tormentil would do badly also.

Thus much as to plants with tanning properties. Recalling your attention to the trees, we have *Castanea vulgaris*, sweet or Spanish Chestnut, rather rare, and with no claim to be considered native, except possibly so in the South or West of England. Mr. Briggs indeed marks it as an alien, but says it is naturalized in Cotehele Wood, where the chestnut trees are justly celebrated for their size and age. The great chestnut at Tortworth, Gloucestershire, measures 52 feet in circumference, and is still flourishing in its green old age. As it was referred to in the

time of King Stephen, 1135, as "the great chestnut," it is supposed to have been growing upwards of 1000 years. Spanish chestnut wood is much esteemed for its durability. In the mountainous districts of Italy, &c., its nuts are an important article of food.

Ulmus suberosa, common Elm, doubtfully wild as a tree in England, is locally common only as a hedgerow bush.

Fagus sylvatica, common Beech, common, has probably become naturalized. Beech-bark is very thin and tough, and when taken off in large sheets is used for making baskets, bandboxes, &c. The wood is close-grained and brittle, and chiefly used by turners for making wooden handles, planes, &c. The nuts, which have the name of beech-mast, abound in sweet oil, and were used by the ancients for food. The beech tree shelters and its shade is the favourite locality of two edible fungi—the morel and common truffle. The high price of and constant demand for truffles in France and other countries makes truffle-hunting a profitable employment there.

That very useful tree—the Larch, *Larix Europæa*, is not a British native, although it has been introduced into this country for 250 years, and endures well the climate here and in England generally.

Corylus Avellana, common Hazel, is a thorough native, and very common. Its wood serves for hurdles, crates, &c. Its nut is sold in the streets during the nutting season boys know so well.

The grey Poplar, the white Poplar, the black Poplar are absent from the Plymouth Flora; but we have a few specimens of the Aspen tree, *Populus tremula*. Its wood is soft and light, and one of the best kinds of fuel for heating ovens, though not pleasant in open fires. Want of time prevents any allusion to the Lime, common Holly, the Sycamore, Maple, Ash, and Spindle trees. The Walnut is not indigenous in Britain.

Leaving trees, let us now refer to the common Hop, *Humulus lupulus*. Mr. Briggs speaks of this as a native though only a denizen, looking "as if indigenous in some of our warm sheltered vales and low-lying hedges, especially between St. John's and Millbrook; in the valley between Boxhill and Ham; in the Yealm valley, and near Flete. When planted in congenial soil it spreads rapidly, and is, I have no doubt, only an introduction at by far the larger number of its stations." Still he marks it as common, enumerating no less than sixty places, within twelve miles of Plymouth, where it grows wild. Now it is not much more

frequently met with wild in the hop districts of Kent and Sussex; and, probably, it can be as well cultivated in South Devon, since here cold north-east winds prevail less than in Kent, where the more exposed hop plantations have often to be protected on their north-east side by stouter poles, and colegates, the hardiest variety of hop. The excessive humidity here may be a worse obstacle; but then how are the two facts accounted for, that the hop is naturalized here, and that when cultivated it was successfully cultivated? On France farm, in the parish of Stokenham, near Kingsbridge, hops were profitably grown from 1818 till his death, sometime after 1830, by Mr. Case, who came from Sussex, and was afterwards agent to a relative of Sir Lydston Newman; old residents in the neighbourhood remembering the fact well. In a wild state the hop flourishes well about Kingsbridge, as in the South Hams.

Having cited the case of the hop as wild and common with us, yet absent from cultivation, it will be interesting by way of 'anti-thesis to refer to the case of the Cabbage, of which we have no wild species in our Flora, but under cultivation no plant more in profusion. *Brassica oleracea*, wild cabbage, is indeed in Great Britain extinct, except on sea-cliffs on some parts of the south coast. Yet there are plenty of escapes from cultivation, and it is the parent of all the varieties of cauliflower, broccoli, Brussels sprouts, red cabbage, Savoy cabbage, and the like. Our ancestors, the Saxons, grew it; and a thousand years ago less land was cultivated than now. Was it in the olden times more common in its wild state, or has it never really become naturalized? Most likely the latter, hardy and easy of growth as it is in our fields and kitchen-gardens. Its grossness makes its unable to subsist on hungry uncultivated land. On sea-cliffs it would be fed by the salts of potash which enter into the composition of maritime plants, all very succulent, as we see in the case of the sea-weeds, the samphire, sea-rockets, &c., the sea being, as Professor Huxley has contended, of greater richness, acre for acre, than the land. It has been found that the red cabbage of neglected gardens of the seaside passes back again in a few generations to the condition of the wild cabbage, and eventually dies out. In this case, therefore, we have an illustration of Mr. Darwin's remark, "We may safely conclude that very many of the most strongly-marked domestic varieties could not possibly live in a wild state."

The seeds of the black and white Mustard (*Sinapis nigra* and

Sinapis alba), the one rare and the other common, are of medicinal value, are used as a small salad, and furnish the common table-mustard of commerce. The seeds of *Sinapis alba*, now quoted at 2s. a gallon, produce about 36 per cent. of oil; and those of *Sinapis nigra* about 18 per cent. This oil, produced after the seeds have been ground and pressed, is chiefly used in the manufacture of soap. After the oil has been extracted, the cake of the seeds is powdered, mixed among other ingredients with 40 per cent. of wheaten flour, and becomes table-mustard. The French mustard has a blacker appearance than ours, and is more pungent, because in its preparation the husks are not removed. The Durham mustard is also darker in colour, and purer than the ordinary table-mustard. The mustards belong to the Cruciferous order of plants. To that order belong also our culinary vegetables—the cabbage, turnip, seakale, radish, cress, horse-radish. For the rotation of crops these are well-fitted, giving back to the soil what corn-plants, for instance, take out.

Crambe maritima, Seakale, is absent from the Plymouth Flora. *Cakile maritima*, purple Sea-rocket, native, is common along the coast. This cruciferous plant, the sea-rocket, has qualities common to the order, and might be used as a vegetable. It is, however, not cultivated. *Barbarea vulgaris*—English common name Winter Cress, or Herb St. Barbara, or Yellow Rocket—native, and common in damp waste spots, is also fit for use as a vegetable, and in Sweden is eaten. Cows eat it; but horses, goats, and sheep rarely touch it. It has a pungent and somewhat bitter taste. *Sinapis arvensis*, common Charlock, very common, and too well known to farmers as a weed, is fit for use as a pot-herb; and cattle and sheep are very fond of it. *Brassica rapa*, wild Turnip, is deemed to be a straggler from cultivation.

Coming now to the Leguminiferous order of plants, mostly of great economic importance, we have the clovers, trefoils, vetches, peas, and beans. It also comprises *Ulex europæus*, common Furze, whin, or gorse, which, as we all know, we have in abundance. The wood being hard, white, and compact, is useful for ornamental inlaid woodwork, such as Tunbridge ware. It is also in the winter time an excellent fuel, especially for bakers' ovens. The young tender branches are a favourite food of sheep and other animals, for which object young furze is sometimes cultivated.

Of the trefoils, many important as fodder, we have more species

wild than cultivated. *Trifolium pratense*, Red Clover, is the clover most esteemed for agricultural purposes in regard to quantity and nutriment. How red clover depends on the number of cats in a district, through the intervention of at first humble bees, and then of field mice, Mr. Darwin shows in his *Origin of Species*. *Trifolium incarnatum*, Crimson Clover, the seeds of which are now quoted at 4d. per lb., is strictly an annual, never living through a second winter. When found wild in Great Britain it is but an escape from cultivation. How different is the White Trefoil, or Dutch clover—*Trifolium repens*—a perennial, and abundantly wild here and all over England !

As of the trefoils so of the vetches—we have more species in the wild state than under cultivation. Apparently the most important species of vetch is the common Tare, or vetch, *Vicia angustifolia*, which is both wild and cultivated.

According to the Agricultural Returns just published for 1884, there is a large increase in acreage of land under pasture, and for 1885 there is certain to be a much larger increase. It may therefore be convenient next, after the great fodder plants, to mention the Grasses—Order *Gramina*, always distinguishable from sedges by the presence in grasses of a ligule, the thin sheath-like appendage at the base, not of the whole leaf, but of the blade where the leaf passes into the sheath. The grass family is the most important in the vegetable kingdom, comprising the rice and bamboo of hot countries, as well as the wheat, rye, barley, and oats, which are now general in our agriculture, and maize or Indian corn, at present absent from British agriculture, except in Cheshire.

Cynodon dactylon, Creeping Dog's-tooth Grass, confined to Cornwall, Devon, and Dorset, is curiously absent from the immediate vicinity of Plymouth, and is not in the Plymouth Flora. In India, where it abounds, it is considered the best pasture grass. *Anthoxanthum odoratum*, Sweet-scented Vernal Grass, is very common with us. The flowers of this grass secrete a volatile fluid, containing benzoic acid, the cause of the well-known odour of the new-mown grass. This is a very valuable plant to farmers in their permanent pastures, especially in the latter part of the season, as it continues until that period to throw out luxuriant stems and leaves. *Phalaris canariensis*, Canary Grass, is a casual or alien, rare; and Mr. Briggs says, "Nowhere permanent, and the species would disappear were it not for the seeds being scattered with refuse from bird-cages,

&c." *Alopecurus pratensis*, Meadow Foxtail Grass, locally common; is good for permanent pastures, and is eaten by most cattle. *Phleum pratense*, common Timothy Grass, very common in our meadows, and too gross for grazing except when young, is valued for hay and permanent pasture. *Dactylis glomerata*, Rough Cocksfoot Grass, very common, is well known by its large panicle, divided into dense globular tufts of flowerheads. As a pasture grass it is perhaps one of our most valuable; very productive and highly nutritive when grown in a light porous soil, but of little value in cold dry land. *Agrostis vulgaris*, common Bent Grass, common in dry places, is useful for sheep on commons and cliff sides, where other grasses will not thrive. It grows early. In similar dry places is the stoloniferous variety of the closely-allied species, *Agrostis alba*, Creeping Bent Grass; also very valuable from its spreading habit in permanent pastures, as well as for making into hay. *Cynosurus cristatus*, Crested Dogstail Grass, very common, is a third grass, useful especially for dry pasture and sheep. *Festuca ovina*, Sheep's Fescue Grass, locally common, is a fourth grass which flourishes in dry, sandy places. *Aira flexuosa*, Heath-hair Grass, common on and near the moors, is a fifth; and *Aira caryophyllea*, Silvery-hair Grass, is a sixth grass, having dry, sandy places for its habitat.

We might have supposed the derivation of the word "Sheepstor" for that well-known parish near here, to be from sheep doing well on its tor, as on other tors. The name was, however, anciently written "Schitestor," or "Shittor."

Briza media, common Quaking Grass, is rather rare, although well known. It is a useful nutritive grass when cultivated in any poor soil; but does not appear to be so valuable in rich, highly-manured meadows. It is a favourite grass with cattle, and, from its putting out numerous leaves, is a profitable grass. *Poa aquatica*, Reed Meadow Grass, of great service for cattle as a tender and succulent grass, is quite absent from our Flora, because we have few stagnant watery places. *Poa trivialis*, Rough Meadow Grass, is very common, and in rich meadow land very valuable for cattle. *Lolium perenne*, Perennial Rye Grass, very common, is well known to be of great value. It comes to perfection early in the season, produces a good supply of herbage, and an abundance of seed. It is a favourite food of most cattle, and contains a large proportion of nutritive matter.

We have now noticed honey, our woodland trees, our wild hop, and wild representatives of green crops, clovers, trefoils, vetches, and pasture. Of wild plants, comprised in the existing *Materia Medica*, we have *Aconitum Napellus*, Monkshood, very rare; *Atropa belladonna*, Deadly Nightshade, also very rare, furnishing liniments, tinctures, and alkaloids. *Hyoscyamus niger*, common Henbane, less rare, and from which an extract and a tincture are obtained, is also very poisonous. From *Conium maculatum*, Hemlock, which is common in the Plymouth Flora, is prepared an extract with active narcotic properties. It is also highly poisonous, and when growing best known by its spotted stem. Another local medicinal and poisonous plant, so abundant and conspicuous that every child knows it, is the purple Foxglove—*Digitalis purpurea*. The following are other local plants named in the British Pharmacopœia, some of which are also food plants: root of great wild Valerian, *Valeriana officinalis*, common; root of common Dandelion, *Taraxacum officinale*, very common, as everybody knows; flowers of common Camomile, *Anthemis nobilis*; common Peppermint, *Mentha piperata*, rare; Spearmint, *Mentha viridis*, very rare; common Caraway, *Carum carin*, rare; flowers of common Elder, *Sambucus nigra*, very common; linseed and linseed oil from seeds of the common Flax, *Linum usitatissimum*, common.

An observation of Mr. Briggs relative to this last plant is useful here. He says, "The occurrence of this seems entirely due either to its seeds being unintentionally sown with corn or other crops, or else to the economic uses of the seeds themselves as 'linseed,' causing them to become scattered about houses and by waysides, where they rapidly vegetate. I have never seen 'flax' as a crop anywhere in Plymouth."

Petals of the Red Poppy, *Papaver rhœas*, a plant we have in abundance, yield a medicinal preparation. The opium of commerce is obtained from capsules of the White Poppy, *Papava somniferum*, absent from our Flora, and which, owing to the growing cheapness of the imported commodity, is getting out of cultivation in Britain. Its growth in China and Persia is increasing rapidly, a single poppy plant producing 32,000 seeds.

Our sweet herbs almost all belong to the Labiatae order. *Salvia Verbenaca*, wild English Clary or Sage, is confined, Mr. Briggs says, to the warmest portions of the area. "The seeds of this plant produce a great quantity of mucilage when moistened

with water, which being innocuous and insipid has been used for the purpose of removing dust and particles of sand from under the eyelids. It is from this that it has obtained the name of clary or cleareye." *Calamintha officinalis*, common Calamint, is very common and very valuable. The leaves are furnished with numerous small glands, which secrete an aromatic volatile fluid. The fresh or dried plant is used for making an infusion, and is often combined with peppermint, balm, sage, pennyroyal, &c., forming a warm stomachic drink. *Thymus Serpyllum*, wild Thyme, flourishing, like the tormentil, on open places, where sheep flourish, is, like the tormentil, said to improve sheep and mutton; probably this is a mistake. Bees, however, we do know are extremely fond of the fragrant flowers of the wild thyme, and the honey produced where it abounds is of a fine quality and flavour. *Origanum vulgare*, common Marjoram, rather common, yields a volatile oil, useful, it is said, in external application in sprains and bruises. From Polwhele's *History of Devonshire* Mr. Briggs takes a note that the marjoram in the eighteenth century was produced in the South Hams in sufficient quantity to supply all the inhabitants with tea from it. *Lamium amplexicaule*, Henbit Dead Nettle, rather rare, has flowers which are a favourite resort of bees, &c. *Ballota nigra*, Black Horehound, very common, is used in London as a cattle medicine. *Marrubium vulgare*, White Horehound, somewhat rare, is the well-known old domestic remedy for coughs. *Melissa officinalis*, common Balm, rather common, is hardly naturalized in this country. Mr. Briggs says an infusion of this herb was formerly much drunk by the countryfolk.

We can hardly overlook two plants very different from each other botanically, but both alike in having the odour of cucumbers, and as being ingredients in the famous old English drink called "cool tankard." One of them, *Poterium sanguisorbia*, Salad Burnet, is common. The other, *Borago officinalis*, common Borage, very rare, attains great luxuriance near beehives, the flowers abounding in honey.

We cannot conclude without mentioning the fact that the hawthorn, blackthorn, bullace, wild plum, wild cherry, dwarf cherry, wild strawberry, wild raspberry, wild pear, crab-apple, mountain ash—all of the Rosaceæ Order, and not before mentioned—have economic qualities, and are present in our Flora.

Four plants, existing in our midst, of the order Umbelliferae—the Samphire, Wild Carrot, Fennel, and Alexanders—were, we need hardly be reminded, referred to by Mr. Briggs in his interesting papers entitled “Queries in Local Topographical Botany.” *Rubia perigrina*, wild Madder, yielding a deep red dye, is more common here than elsewhere in the United Kingdom. Ray noticed it 200 years ago. The Gentians, Order Gentianaceæ, delighting in sandy soils, are rather absent from the Flora. Wild Chicory, *Cichorium Intybus*, is common.

THE RELIGION OF THE INCAS AND OF THE AZTECS.

SYLLABUS OF LECTURE BY REV. W. E. DARBY.

(Read December 11th, 1884.)

ROMANTIC conquests of Cortes and Pizarro. Unique character of the empires overthrown; their remarkable civilization and development. Their religions especially interesting to students of history, comparative religion, and man. *Sui generis*, yet having much in common with more ancient religions. The Mayas of Central America. Their civilization. Relation to the Mexicans. Religious conceptions in common. The Aztec Empire, in what sense existing at the time of Cortes' invasion. The Toltecs, Chichimecs, and Aztecs. Mexican mythology and deities. Tutelary gods. Legend of Quetzalcoatl. Its influence on the Spaniards' success. Minor deities. Human sacrifices. Temples. Sacerdotal and monastic institutions, eschatology, &c. Peru: its government a theocracy. The Incas. Legend of their origin. Their hierocratic rule. Its relation to the Peruvian constitution and civilization. Material well-being of their subjects. Social and national life. Marriage, &c. Fall of the Incas. Capture of Atahualpa. Peruvian mythology and deities. Gorgeous temples. Sacrifices, festivals, priesthood. Virgins of the sun. Future life, &c. General remarks: Comparative religion. Stages of religious faith. Position, from this standpoint, of these religions. Attempted reforms. Theory of their migration or importation untenable. Autochthonous, therefore. Testimony of comparative religion to the unity of human nature, &c. Conclusions.

HARBOUR ACCOMMODATION IN THE WEST.

BY J. C. INGLIS, C.E.

(Read 18th December, 1884.)

HARBOURS, and the questions relating to them, are only just now beginning to receive primary attention. There are various causes for this negligence on our part as a nation. Although an immense amount of money has been expended, and evidence collected in connection with the publication of the various Blue Books issued by the Government from time to time, remarkably little has been actually done. Committee after committee has sat and recorded its views in the most definite fashion, and generally in the same direction; but with the publication of the Report its labours seem to end. Let us hope that the fate of the recommendations of the last Committee, some of which affect the West Coast, will be more fortunate. Undoubtedly the apparently insuperable obstacle to the improvement of our harbours has been the enormous cost of sea works; nor, I fear, is this removed, although Portland cement and concrete have introduced a new era in the construction of submarine works. However interesting this branch of the enquiry may be, we must pass it by this evening, and look at the economic and social aspect of this harbour question. Of all districts in Great Britain and Ireland, none are or have been more intimately associated with the sea than we in Devon and Cornwall. Our local history is mainly the chronicle of our "seafaring venturesome forefathers," while much of the inherited wealth of the two counties owes its origin to "pilchards" and, to be discreet, "maritime speculation." In those early days, before coal and iron created engineering science and enterprise, and made it so much easier to overcome and alter natural features, the snug, natural estuaries and bays of the South Coast were much more important than they are to-day. Charles Kingsley, in *Westward Ho!* gives us, it may be, a rather highly-coloured, but, it is generally admitted, a correct glimpse of West-Country life, and how intimately it was associated with the sea.

Our member, Mr. R. N. Worth, in his researches as to Hawkins and Drake, and our own town of Plymouth, has also afforded us more prosaic but exceedingly interesting peeps of the maritime activity of the past.

The gigantic strides made by our railway system were ably laid before this Society some time since by our member, Mr. P. Stewart MacIver, and I need not recapitulate figures, which after all convey no adequate conception of this our most vital and complicated engine of civilization. The varied functions which the railway system performs socially and economically are known more or less to all, and their vastness admitted; but our maritime or shipping interest is less generally thought of, although this industry has advanced of late years "on all fours" with the railway system, and it is one which as time goes on will claim more attention than it receives even at present. It certainly is one where experience and science progress at an increasing rate, and where the unexplored fields of applied science are larger than most imagine.

The real subject for this evening's consideration is the means by which these two immense but perfectly distinct interests—the "land carriage" and the "sea carriage"—are brought into contact, how the one can be improved and be the complement of the other, and thus complete the chain of communication. Particularly speaking, the improvement of the harbours on our coasts means the accomplishment of three objects. Firstly, the connecting the land carriage and the water carriage; secondly, the saving of a large number of lives and a great amount of property annually; and thirdly, the development of the fishing industry, which is in fact the creating of an immense field for the absorption of labour, second in importance only in the economy of the State to the agricultural interests.

A glance at the chart, showing the wrecks and casualties on the coasts of England and Wales during the five years—from July, 1877, to July, 1882—which I have taken from the last report published, shows the casualties which have occurred during that period. You will observe that the various marks indicating casualties are very thickly placed on our own coast, especially between the Start and the Scilly Isles; but I shall have occasion to refer to this more particularly further on. I may mention that on this map the names of every harbour, port, or place frequented

by boats or shipping, is filled in, and none others. First then let us consider how the improvement of our harbours is to facilitate the carriage by sea and on land. On the south-west coast we are specially favoured with several excellent natural harbours—harbours where Nature has done everything, and man comparatively little. We have, first, Dartmouth; secondly, Plymouth; third, Fowey; and fourth, Falmouth, of the first class, and many lesser ones. But the three—Dartmouth, Plymouth, and Falmouth—are ports of the first importance in the kingdom; and as the railway facilities between London and the West, and the Midland Counties and the West are improved, as certainly they will be, these ports will correspondingly increase in importance. Dartmouth is a very good harbour from which to start, but not by any means so easy to make in rough weather. Two important lines call on their outward voyages here.

Plymouth Harbour is after all the great south-west Channel port. The only harbour which at all competes with it here is Falmouth. Let us compare our Plymouth Harbour with some of the other first-class harbours, either completed or in course of completion. I would draw your attention to the table which I have prepared, and which shows Plymouth Harbour compared with Portland, Holyhead, and Dover harbours.

Table I.

HARBOURS OF REFUGE OF THE FIRST CLASS COMPLETED OR IN COURSE OF CONSTRUCTION.

Name.	Sheltered Areas in Acres at Low-water.	Depth at Entrance at Low-water.	Total Length of Breakwater.	Cost of Works Executed.
	Acres.	ft. in.	ft. in.	£
Plymouth . {	5 fathoms, 800 3 „ 1380 Low-water, 1840	{ 42 0	5100 0	1,517,000
Portland . {	5 fathoms, 1290 3 „ 1590 Low-water, 1800	{ 54 0	8100 0	1,033,000
Holyhead . {	5 fathoms, 330 3 „ 575 Low-water, 667	{ 50 0	7900 0	1,285,000
Dover . . {	5 fathoms, 150 3 „ 200 Low-water, 420	{ 40 0	Completed, 2200 ft. Projected, 6500 ft.	800,000 1,590,000

This table is compiled from official and consequently exact information, and it shows that we have here in the harbour 800 acres of water, having a depth of five fathoms and over at low-water spring tide; 1380 acres of three fathoms and over, and 1840 acres at low-water. The depth at the entrance is forty-two feet, and the total length of our Breakwater is 5100 feet, which cost £1,517,000. Portland, another Channel harbour, is very much the same as Plymouth in its total extent. It is 1290 acres with five fathoms and over, 1590 acres three fathoms and over, and 1800 acres at low-water. A glance at the map showing these harbours at once makes clear the fact that Plymouth is immensely superior to either of the others on account of its extensive ramifications of deep water beyond the area of the harbour proper. There is, first, the Hamoaze, with its splendid frontage and deep water; second, Millbay, with its commercial docks; and third, Cattewater, with Sutton Harbour. One of these last-mentioned places alone, and especially the first or third, would form a noble harbour in itself, but placed as they are give Plymouth its commanding position among the first-class harbours of the world. Plymouth Sound was officially described by an admiral of great experience, before the erection of the Plymouth Breakwater, as a perfect "hell" in a southerly gale. We all know now that the terrors of a gale from a southerly point are removed, and it is no uncommon sight to see three to four hundred vessels riding at anchor in safety during long-continued and strong easterly gales. This then is an instance of what the provision of accommodation has brought. Without Plymouth Breakwater our port would not be the "calling point" for thirteen or fourteen lines of steamers, which at the present time make Plymouth a port of call. I have prepared a list of the lines which use this port, both for outward and homeward traffic, with the dates on which they commenced to call, and also the frequency of their visits.

Up to now only passengers, mails, and specie have been landed or embarked to any extent; but doubtless as competition increases, and the cost of land carriage is reduced, such lines as the Hamburg-American and others may be induced to take in part cargo collected from Ireland, Scotland, and the ports in intimate connection with Plymouth by water carriage.

Table II.

LINES OF STEAMERS OCEAN GOING WHICH MAKE PLYMOUTH
A PORT OF CALL.

Number.	Commenced to Call at Plymouth.	Name of Company.	From	For	Call Outwards at Plymouth Once in Weeks.	Call Homewards at Plymouth Once in Weeks.
1	1867	Royal Mail Co. . . .	London.	Panama.	Weeks.	Weeks.
2	1869	Hamburg American . .	Hamburg.	New York.	... 2	1
3	1873	Union Co.	London.	Natal.	2 2	2
4	1875	Donald Currie and Co. .	London.	Natal.	... 2	2
5	1878	British and African Steam	Hamburg.	West Coast.	2 ...	...
6	1879	Orient Co.	London.	Sydney.	2 2	2
7	1881	British Indian S. N. Co. .	London.		4 4	4
8	1881	Money Wigram . . .	London.	Australia & N. Z.	Oocl. Oocl.	Oocl.
9	1882	South African Line. . .	London.	S. African Ports.	4 ...	...
				India,		
10	1883	Peninsular & Oriental Co.	London.	{ Australia, }	... 1/2	1/2
				{ China, }		
				{ Australia, }		
11	1883	New Zealand Shippg. Co.	London.	{ New Zealand. }	4 4	4
				{ Australia, }		
12	1884	Shaw, Savill, & Albion Co.	London.	{ New Zealand. }	4 4	4
				{ Australia, }		
13	1884	National Line	London.	New York.	2 2	2
14	1885	British Indian S. N. Co. .	London.	India.	... 2	2

These ocean-going lines of steamers have not up to now come alongside any quay, but are attended on by the Great Western Railway Company's tenders, which land the passengers and mails at Millbay.

This list is one of the greatest importance to us, and, in my opinion in the future it is much more likely to increase than it has even in the last few years. There is no suppressing the fact that the two great rival ports on the south coast for this trade are Plymouth and Southampton. Each has advantages peculiar to to itself, a fact which shows us how necessary it is, if we wish Plymouth to progress, to keep an exceedingly strict watch, as I am glad to say our Chamber of Commerce here does, on the interests of the port, especially as regards the land carriage. Plymouth has great maritime advantages over Southampton, while Southampton has the substantial privilege of being about three hours nearer London. In connection with the Plymouth Harbour, it is interesting to know that the predictions and remarks in Sir

Table III.
SHOWING NUMBER AND TONNAGE OF SAILING AND STEAM VESSELS BELONGING
TO THE UNITED KINGDOM.

Year.	VOYAGES.					
	SAILING VESSELS.			STEAM VESSELS.		
	SAILING.			STEAM.		
	Number of Vessels.	Tonnage.	Number of Vessels.	Tonnage.	Number of Vessels.	Tonnage.
1860	¹ 19,090	² 3,852,245	³ 929	⁴ 399,494	⁵ 19,090	⁶ 3,852,245
1870	19,940	4,519,141	2240	1,039,969	19,940	4,519,141
1880	16,183	3,750,442	3789	2,594,135	16,183	3,750,442
1881	15,223	3,569,168	4088	2,921,785	15,223	3,569,168
					⁷ 3,716	⁸ 1,597,976
					8,960	4,159,376
					15,156	10,376,540
					16,352	11,687,140
					⁹ Abt. 5 to 1	¹⁰ Abt. 2½ to 1
					„ 2¼ to 1	„ 1 to 1
					„ 1 to 1	„ 1 to 2½
					„ 1 to 1	„ 1 to 3½

Note.—The last two columns show, that whereas in 1860 there would be 5 sailing vessels to 1 steamer, the proportions now are rather more than 1 steamer to 1 sailing vessel. And whereas the tonnage at sea was 2½ sailing to 1 steam, there are now 3¼ steam to 1 sailing ton. The figures in columns 5, 6, 7, and 8, of course, do not represent vessels and tonnage actually at sea; they are merely given to show how the proportions in columns 9 and 10 are arrived at.

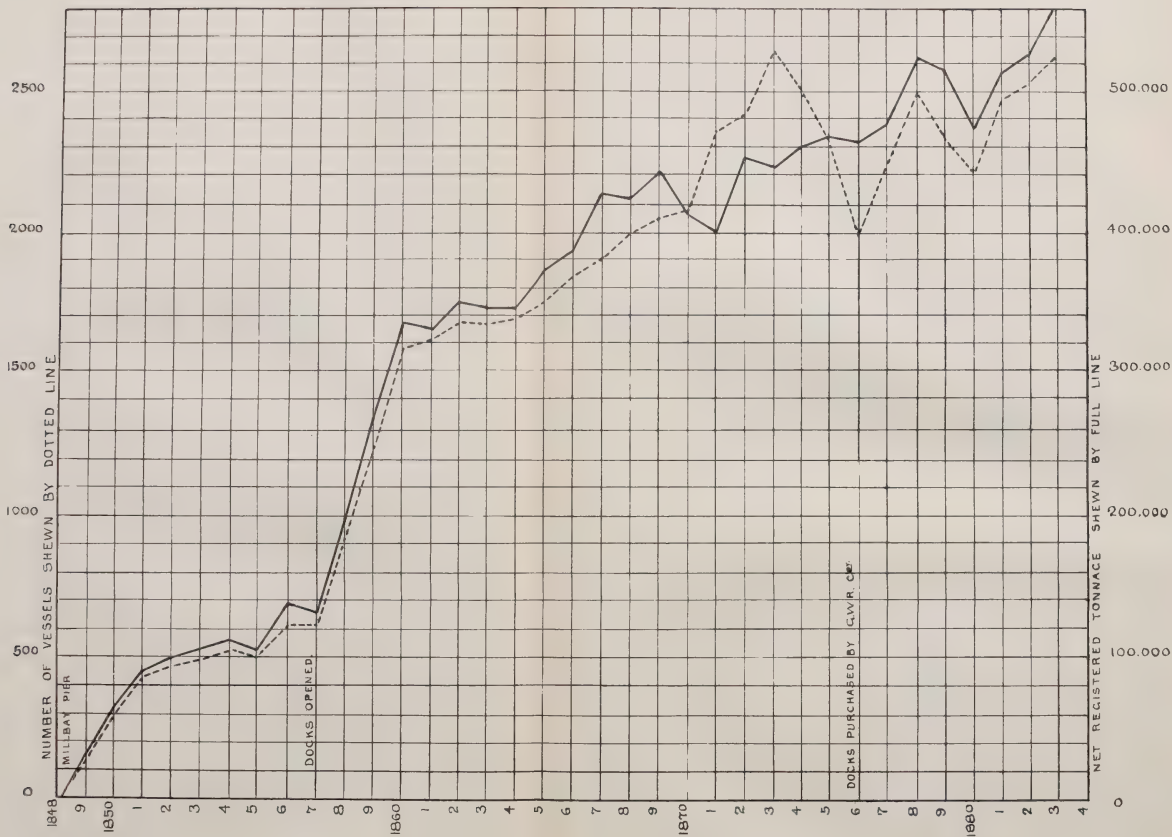
John Rennie's Report recommending the construction of the Plymouth Breakwater in its present form have been borne out by subsequent facts. The Sound, despite extraordinary tales, is not silting up at any appreciable rate, this being due solely to the strong tidal currents. Sir John, among other proposals made by him when reporting on the improvement of Plymouth Sound, suggested the construction of a Breakwater from Penlee Point; and it is very greatly to be regretted that no steps were taken to bring this matter before the late Select Committee on Harbour Accommodation. I do not think that there exist two opinions on the desirability of further protection from the south at the western entrance, and were a Breakwater projected from Penlee Point it would beyond doubt cut off the only dangerous "send" which comes into our harbour. I am aware that many gentlemen have strong views on this matter, and I hope that in the subsequent discussion they will give expression to them.

Now that we are dealing with ocean-going vessels, I would remind you that harbours and harbour accommodation must of course be what the vessels afloat require, and the table which I have here shows how very quickly the nature of the "mercantile navy" has changed.

Table III. is compiled from the returns of the Board of Trade. In the year 1860, without going into the details shown on the table, there were afloat five sailing vessels to one steamer, or two and a half tons of sailing tonnage to one ton of steam tonnage. Similarly, in 1870, there were two and a quarter sailing vessels to one steamer, or one sailing ton to one steam ton. Again, in 1880 there was one sailing vessel to one steamer, and one sailing ton to two and three-quarters steam tons. In 1881 these proportions were still one sailing vessel to one steamer, and one sailing ton to three and a quarter tons of steam tonnage. These last show how rapidly the size and numbers of our steamers have increased of late years.

Having dealt with the lines of steamers calling at Plymouth, and before leaving the consideration of our own port, which of course to us is of the first importance, I will draw your attention to the commercial business which is done in our commercial harbours, and I think the consideration of these is on the whole decidedly interesting. Perhaps several present remember with

PLYMOUTH GREAT WESTERN DOCKS 1848 to 1884.



some slight regret when Millbay (now the site of the Great Western Docks) was a beautiful rock-bound inlet, and the only engineering work within sight was the present Millbay Pier, built from the designs of Mr. Rendle in his younger days. And even Millbay Pier is interesting as being the prototype of the great Portland Breakwater, which Mr. Rendle subsequently designed and carried out. The experience gained in the construction of this small work was, Mr. Meadows Rendle told me, of the greatest value to his father when carrying out the larger work. This Millbay Pier, constructed in 1848, rapidly developed a traffic which increased steadily till 1851, when the number of vessels dealt with was 428 with a register tonnage of 91,792. From that year till 1857, when the present Millbay Docks were opened, it progressed rapidly. The number of vessels that year at Millbay Pier was 629, with a register tonnage of 135,120. As I have said before, the Millbay Docks were opened in the year 1857, and to give you an idea of the advantage which these excellent docks have been to the port, I would refer you to Table IV.

Table IV.

COMPARATIVE STATEMENT OF TRAFFIC AT THE PLYMOUTH GREAT WESTERN DOCKS

FROM JANUARY 1, 1848, TO DECEMBER 31, 1883.

Year.	Number of Vessels.	Registered Net Tonnage.	Year.	Number of Vessels.	Registered Net Tonnage.
1848	3	698	1866	1843	385,547
1849	141	30,311	1867	1910	429,752
1850	292	62,654	1868	2016	421,137
1851	428	91,792	1869	2059	443,165
1852	465	99,505	1870	2079	410,947
1853	491	104,965	1871	2375	399,484
1854	529	112,964	1872	2441	453,869
1855	500	106,616	1873	2663	445,152
1856	609	130,993	1874	2524	461,427
1857	629	135,120	1875	2308	469,811
1858	910	195,414	1876	1988	464,420
1859	1256	269,675	1877	2207	475,111
1860	1564	335,966	1878	2502	525,178
1861	1620	333,132	1879	2336	515,289
1862	1698	346,929	1880	2193	472,687
1863	1675	343,762	1881	2397	512,644
1864	1692	348,904	1882	2391	525,222
1865	1758	370,699	1883	2554	563,995

The progress of the traffic at Millbay from the opening of the docks was rapid and uninterrupted till 1860, when 1564 vessels entered with a register tonnage of 335,966. From 1860 onwards the table shows that the trade, although generally increasing, fluctuated; and even down to the present time there are indications that the fluctuations are increasing. I would point out to you the relative changes which the number of the vessels makes with respect to the net register tonnage. Compare for instance the year 1873, when there were 2663 vessels with a register tonnage of 445,152, with the year 1876, when there were 1988 vessels with a register tonnage of 464,420, showing that the tonnage which frequents our port is now being carried in larger vessels.

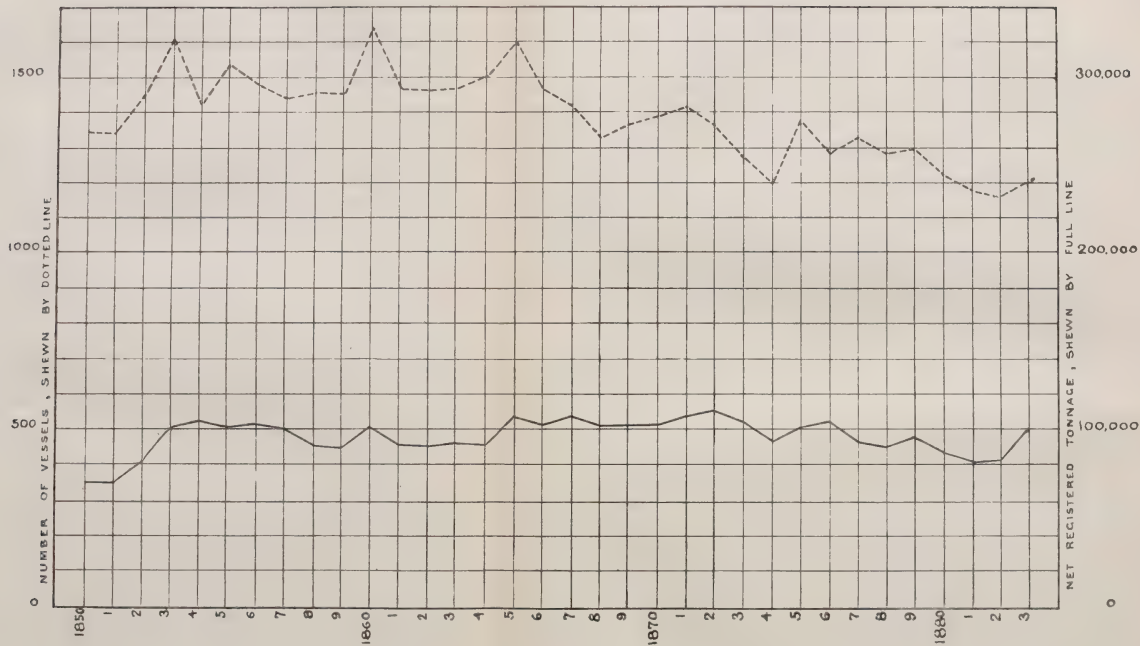
Table V.

**COMPARATIVE STATEMENT OF TRAFFIC AT SUTTON HARBOUR,
PLYMOUTH,
FROM 1850 TO 1883.**

Year.	Number of Vessels.	Registered Net Tonnage.	Year.	Number of Vessels.	Registered Net Tonnage.
1850	1335	76,949	1867	1426	107,635
1851	1334	75,584	1868	1334	102,965
1852	1453	84,556	1869	1359	102,788
1853	1622	107,272	1870	1380	103,942
1854	1427	109,634	1871	1420	109,122
1855	1535	106,215	1872	1426	111,934
1856	1475	113,947	1873	1288	103,661
1857	1442	101,948	1874	1217	93,200
1858	1462	93,620	1875	1394	100,990
1859	1450	96,821	1876	1291	103,220
1860	1644	109,775	1877	1321	94,428
1861	1455	97,350	1878	1281	91,968
1862	1446	96,120	1879	1308	95,705
1863	1474	93,974	1880	1230	87,392
1864	1512	96,396	1881	1095	83,694
1865	1564	108,837	1882	1078	81,793
1866	1472	103,841	1883	1108	101,387

This fifth table shows the corresponding returns of Sutton Harbour over as long a period as I have been able to procure them; viz., from 1850 to the present time. Examining the tonnage returns of this harbour, we find a trade, in the year 1850, of 1335 vessels, under a registered tonnage of 76,949. This increased up till the year 1854, when the figures were: number of vessels, 1427; registered tonnage, 109,634. Since

SUTTON HARBOUR from 1850 to 1883.



then, with the exception of a depression during 1858-59, and 1861-64, trade went steadily on, neither increasing nor decreasing till 1872, when the returns were: 1426 vessels, registered tonnage, 111,934. Since 1872, on till 1882, there was a steady decrease. In the latter year the returns were: 1078 vessels, 81,793 registered tonnage. 1883 shows an increase; but I fear 1884 will bring us back to something like the figures of 1882, which is the lowest tonnage return for this harbour since 1851.

Dividing the registered tonnage in Sutton Harbour for the year 1883 by the number of vessels, gives us an average size of ninety-one and a half registered tons per vessel. For the same year the corresponding quotient at the Great Western Docks is 221 tons each; Falmouth, 584 tons each; and in Cattewater, 121½ tons each. The character of the trade done at Sutton Harbour, as compared with that done at Millbay, can thus be seen at once.

I give similar returns for as long a period as I could obtain them, also plotted to the same scale, for Falmouth Docks, showing that while a smaller trade is done at that dock, it is mostly in vessels of the larger class.

Table VI.

COMPARATIVE STATEMENT OF TRAFFIC AT FALMOUTH DOCKS
FROM THE YEAR 1870 TO 1883.

Year.	Number of Vessels.	Registered Net Tonnage.	Year.	Number of Vessels.	Registered Net Tonnage.
1870	406	234,207	1877	517	296,758
1871	425	224,922	1878	522	313,605
1872	548	248,652	1879	442	319,458
1873	605	239,077	1880	465	331,477
1874	565	243,579	1881	471	298,090
1875	503	238,858	1882	571	318,726
1876	515	272,975	1883	578	337,653

I have also a table showing the returns from the Cattewater Harbour since the year 1876, when it was incorporated, to the present time. In 1877, the year after the Commissioners were appointed, the number of vessels paying dues in Cattewater was 2392, and their registered tonnage, 255,787. Last year there were: number of vessels, 1414; registered tonnage, 166,037—a reduction of nearly one half of the returns from 1877.

Table VII.

COMPARATIVE STATEMENT OF TRAFFIC AT CATTEWATER HARBOUR

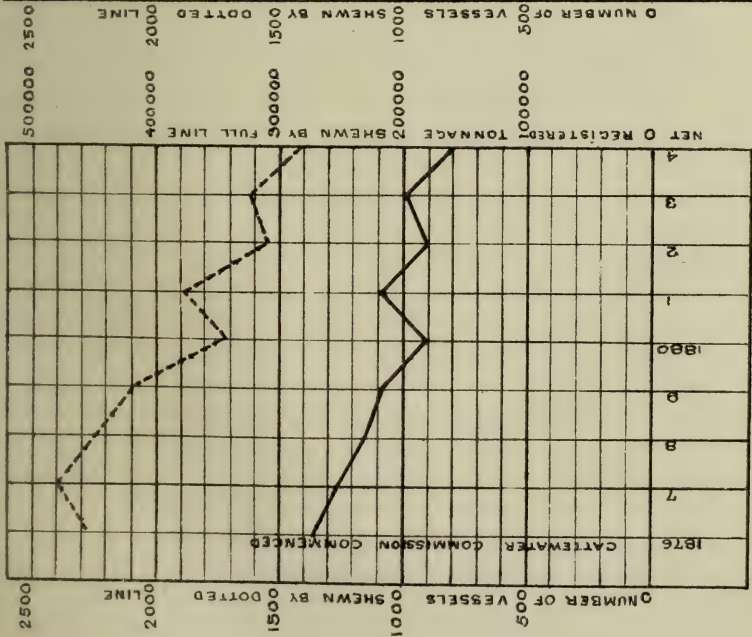
FROM JUNE 29, 1876, TO MAY 31, 1884.

Year.	Number of Vessels.	Registered Net Tonnage.	Year.	Number of Vessels.	Registered Net Tonnage.
1876	2263	266,114	1881	1875	215,189
1877	2392	255,787	1882	1556	183,146
1878	2232	234,264	1883	1610	195,458
1879	2098	214,639	1884	1414	166,037
1880	1718	183,567	—	—	—

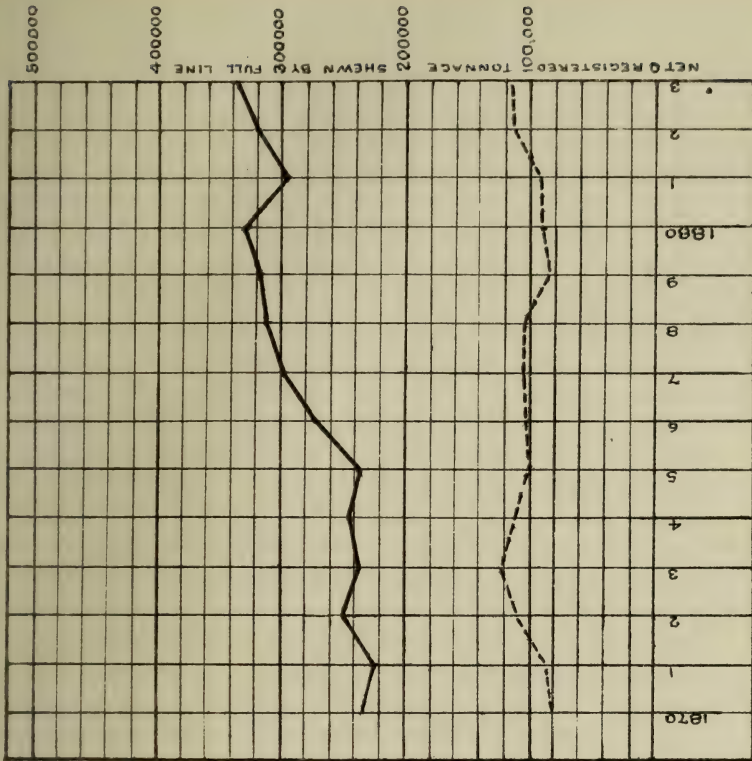
The Cattewater Harbour Commissioners came into authority in the year 1876, and I dare say some of you will be surprised to see the course which apparently the number of vessels and the registered tonnage are taking in that harbour. The trade in the year 1876 seems to have started with a larger number of vessels and a larger registered tonnage than has since been obtained ; and the steady decrease in this harbour is a subject which ought to be carefully studied by those who have the care of the harbour. There are many reasons which one can assign for the decrease shown on the diagram, such as the stoppage of many vessels entering the harbour for ballast. These vessels now find it more economical, the rates of towing being reduced by one half, to employ steam-tugs to tow them to the clay ports in place of carrying limestone. Another source of decrease has been the loss of the cattle trade, which has gone to Millbay. Another cause is the loss of the large vessels and steamers, which before the erection of the deep water wharf at Millbay could only be dealt with in this port by first going up Cattewater, and subsequently being towed to the docks or other quays. The moral to which these facts point seems to be that the link to which I referred in the first part of my lecture ; viz., the connection of the land carriage with the sea carriage is not so complete in Cattewater Harbour as it ought to be. Compared with the progress of the Great Western Docks, where extensive improvements are constantly being made, or even with Falmouth, where increased attention has been paid to the wants of larger vessels, Cattewater does not show favourably.

Before leaving this part of our subject, it is interesting to note,

CATTEWATER HARBOUR 1876-1884



FALMOUTH DOCKS From the YEAR 1870 to 1883.



in connection with our Plymouth commercial harbours, that in Sutton Harbour while the number of vessels keeps much about the same, the register tonnage paying dues is gradually decreasing. This is due to various causes, one of course the absorption of the larger vessels by Millbay, and also the reduction in nett register tonnage which has been made from time to time by the Board of Trade. The last remark of course applies to all tonnage returns.

I should like to say a word on this reduction of tonnage. I find, for instance, that a steamer called the *Augusta*, trading to Sutton Harbour in the year 1869 (31st December), had a register tonnage of 125, while on her next appearance in this dock the register tonnage was 59; and as the dues are payable on the register tonnage, this shows a serious drop on the receipts of the harbour. To be brief on this matter, the Board of Trade introduced their first change in the register tonnage in 1854. Since then, from one reason and another, different principles and practices have been tacked on to the original rule, till in 1867 the deduction for crew space was made; and then again in 1883 what is known in the commercial world as the "*Isabella* decision," effected a further reduction in the register tonnage of steamers. And this last decision is about the best proof of the mess into which the Board of Trade have navigated their own pet subject—"the measurement of the register tonnage." I need not trouble you with details, but simply quote a few examples of how these rules operate on the receipts of dock companies. For instance, the steamer *Talisien* has a gross register tonnage of 59, and a nett register tonnage of eight, on which she pays dues. The *Tasmania* has gross register tonnage 81, nett register tonnage eight; and a boat which some of you know, the *Thames*, which used to be at this port, had a gross tonnage of 125, and a register of 41. The *Flying Spear* had a gross tonnage of 111, and a nett register of five. The *Flying Arrow* had a gross register tonnage of 123, and a nett of eight; while the *Flying Breeze*, belonging to the same class and owners, no doubt profiting by their arithmetical experience of former boats, has a gross register tonnage of 88, and a nett tonnage of the figure nothing. What the harbour authorities were about when the Board of Trade were patching and altering the nett register tonnage, without in the least consulting them, I cannot conceive. However, it is plain that had the original tonnage rules been adhered to, the

tonnage returns for our port would have been very different. It may be taken as a general rule for small vessels that the register tonnage—which I ought to say is a roomage ton, being 40 cubic feet of space, represents about half their carrying capacity.

In Devon and Cornwall the export and import trade depend very much upon one another, indeed more so than in most localities. Every export trade ought to be encouraged as much as possible, because the advantage is reaped in the imports directly; and these being of general consumption, the advantage is obvious. We have the important clay harbours of Par, Charlestown, Fowey, and Pentewan. These are mainly supported by the clay industry. Last year Par shipped about 80,000 tons of clay, and imported about 20,000 tons of coals; the imports being one quarter of the exports. Again, at Charlestown about 90,000 tons of clay were shipped, and 20,000 tons of coals imported. Obviously the exportation of these 170,000 tons of clay cheapened immensely the importation of the 40,000 tons of coals used in the locality. Similarly it is possible to send macadam from Penzance to all the Welsh ports, and to London and the North of England, at a workable price. The amount of import and export traffic which is done at Penzance, as compared with Falmouth, depends upon the area of the country, and on the railway rates. But the traffic at Plymouth depends very much more on the railway rates than either that of Falmouth or Penzance. Bristol is the great West-country port competing with Plymouth for commercial work through the railway systems; for every change in the rate of, say, grain means a corresponding change in the area supplied from the one or the other port. Thus so long as grain can be imported to Bristol and carried from thence to Exeter slightly cheaper than it can be imported at Plymouth and carried to Exeter, a shorter distance by the way, so long will Exeter be supplied from the Bristol market. The importance of these railway rates, without going into details, is thus obvious, and their great influence upon harbour traffic. A slight increase in favour of one place for another means the diversion of a large amount of traffic from one port to another.

I will now proceed to deal with another branch of our subject, one which claims our attention, if for no other reason, than that it

affects a class deserving of our support—a class which owing to their occupation are not well able to advocate their own wants—a class which are of the first importance to the state in supplying food to the million, I mean the fishing population. The commercial maritime interests are tolerably well looked after by shipowners and their agents, gentlemen who as a rule know how to take care of themselves; but the same is not the case with the fishing population. Somehow or other there never has been any such organization or co-operation of labour in the fishing business as there has been in the merchant service. Each six or seven men owe the amount of their earnings to their own exertions; and being independent in this way, and also moving from point to point along the coast, they have been unable to establish any sort of combination for the furtherance of their interest. The Fisheries Exhibition has done much to create an interest in fishery matters. It has also revealed the vastness of the traffic, and the result already has been that the attention of capitalists has been turned to the development of this industry. The construction of harbours where wanted for the fishermen along our coasts is really the creation of a valuable property, and consequently a direct gain to the nation. Allow me, in illustration of this statement, to read an extract from the evidence given by Mr. W. Spears, a fisherman of North Sunderland, before the Select Committee of the House of Commons. (Question 8764, page 367.) And if you question fishermen on our own coasts, you will find that they have the same story frequently to tell. Through the kindness of Mr. Francis Brent, I have ascertained that the number of fishing boats of the first and the second class at the various Devon and Cornwall Ports is as follows at this date:

On the South Coast between Brixham and Penzance:

	Trawlers and First-class Boats.	Hookers and Second-class Boats.
Brixham	150	40
Dartmouth district	177	132
Plymouth, including Cawsand & the Yealm)	87	173
Fowey	20	172
Falmouth	14	40
Penzance	15	444
Total	463	1001

On the North Coast we have :

	Trawlers and First-class Boats.	Hookers and Second-class Boats.
St. Ives	110	140
Newquay	...	6
Padstow	...	57
Barnstaple	8	1
Appledore and Clovelly	18	24
Total	136	228

Or in all, from Brixham to Clovelly, 599 first, and 1229 second class.

These figures by no means give an adequate idea of the extent of the fishing operations on our coast, as during the mackerel and herring season many East and North-Country boats work off our coast. They represent generally the amount, but not all, of the local capital employed in the fishing industry, as also the number of local men earning a livelihood at fishing. Each trawler carries about six men, making for the 599 boats between Brixham and Barnstaple 3594 men. Similarly for the second-class boats, if we say four men as an average all round—though the hookers only carry three men the other second-class boats carry more—this will give us 4916 engaged in this branch of the fishery.

Taking the trawlers and first-class boats at £800 a piece new, all found; and the second-class boats all round at £200, this gives us—

Capital in trawlers and first-class boats	£ 479,200
Ditto second-class boats	245,800
Total capital	725,000

This is by no means an extravagant estimate when it is remembered that a good trawler costs new £950, a properly-fitted hooker ready for sea £275, and a fully-equipped second-class seine boat about £400.

We must now get some idea of what service these boats are to the inhabitants. How much do they catch on an average? From observations extending over several years, I find that a trawler in Plymouth grosses about two-fifths of the cost of the trawler per annum, which, say at £800, would be £320. This is a very small return per boat compared to the East-Country boat, which grosses from £700, at least, to £1000. I was struck

with the fact, in perusing the evidence given by the West-Country fishermen before the Select Committee, that the Committee were astonished that the gross earnings of the West-Country boats should be so small compared with the East-Country boats, although the fishing-ground on the West Coast was admittedly as good as the East. No definite explanation was given of this discrepancy; but in my opinion it mainly arises from the more energetic manner in which the East-Country men handle their boats. These latter keep out to sea for a week or ten days, and as frequently as possible send in their fish by carrying boats, while they continue fishing. A hooker or second-class boat, being a smaller boat, will I find at Plymouth gross one and one-third times the value of the boat, or at £200, the cost of the boat, will catch £266 worth of fish in the year? These are large figures, but they are in the main correct; and the totals for the fleet, which we have above described, show that—

Trawlers (grosses)	191,680
Hookers and second-class boats	326,914
Or in all	518,594

Or in round numbers half a million is hauled up from the sea and made serviceable to the feeding of the millions. This estimate does not include the catches made by *strange* boats, or the exceptional hauls of pilchards, herrings, and mackerel.

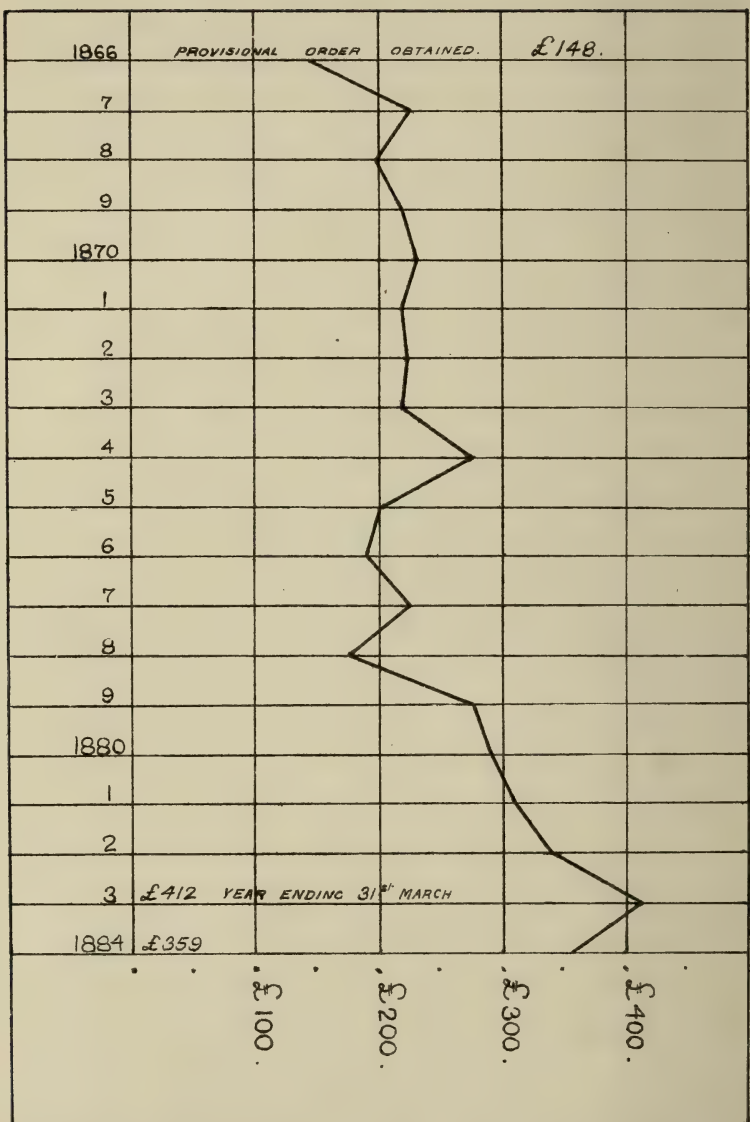
This then is only a glimpse at one of our local industries, which in the future will receive much more attention than it has in the past. We have been accustomed to worship the “land” as the only really producing field in the country. It is now, however, dawning upon us that in proportion as we embark on the sea around our coast we create another food-producing property. To develop all these fisheries requires, in the first place, harbours; without these it is impossible for this industry to be properly conducted. And this is what is being experienced all around the coasts at this moment. On the coasts of Devon and Cornwall much in this direction can yet be done with profit to the counties. Take, as an instance of an isolated fishing harbour, Mevagissey. This is a fishing village about five miles from St. Austell, with a population of about 3000. It is not connected with the railway system except through St. Austell. We have here a small natural harbour placed in the best possible position for protection, and it

is a fact that the fishermen with their families have to leave the town, not because they cannot obtain house room, or land on which to build houses, but simply because there is no room for their fishing boats in their exceedingly small tidal harbour of three and a quarter acres. In 1866 the Mevagissey men got an Act, accompanied with the usual extensive scheme of harbour improvements, costing many thousands of pounds, which of course can never be accomplished except gradually.

I have shown in diagram the receipts of this harbour from the dues on the boats, from its commencement up to the year ending March, 1884. This shows among other points that the fishing industry is a very fluctuating one; for this is a harbour unaffected by any influences besides the fishing and its concomitants. Mevagissey harbour started in 1866—the year in which it obtained its Act—with a revenue of £148, which increased in 1867 to £225, where it remained approximately till 1874, when there was a sudden increase to £275, followed by a severe depression from 1875–78. Since this last date the revenue seems to have prospered, reaching its maximum of £412 in 1883, and £359 in the year ending March, 1884. An expenditure of capital in the harbour at this place would add to the size of the town and enable more persons to live in comfort in the county. This small spot sends on an average £12,000 worth of pilchards to the Mediterranean per annum, and pays something like £5000 per annum for the carriage of the fish caught. One hundred hands are employed off and on at its sardine factories.

Going further west we find that the same state of matters is repeated in Penzance Bay to an even greater extent. We have here a bay of some twenty-five miles of coast-line, abutting on the finest fishing-ground around the British Isles, with no single harbour to which boats can run at all states of the tide; and as the most dangerous and prevalent winds are from the south-west, these boats are simply embayed between the Land's End and the Lizard. In consequence of this many days' and nights' fishing are lost by the fishermen in this district, because they are unable to start at any time, and dare not run in for shelter at low-water at any point on this coast. During the last twenty-five years 130 vessels are said to have been wrecked in this bay, and four-fifths of these wrecks occurred on its eastern side. Just fancy a fishing fleet of some 300 boats, with a capital of

MEVACISSEY HARBOUR . Diagram Shewing Revenue from 1866 to 1884.



£200,000, as this is, belonging to a bay which has not one single harbour to which the boats can run for shelter at low-water in stormy weather. For small capitalists this is certainly conducting their business at too great a risk. A similar crowding of harbour accommodation limits the population at several points along this coast, in particular at Mousehole.

St. Ives is in almost as bad a condition ; and it too has one of the largest fishing fleets in the West attached to it, close upon £180,000 being invested in the boats belonging to this port. With regard to St. Ives, the last Committee say, "As to that portion of our coasts between Land's End and the Welsh Coast, including the whole of the Bristol Channel, works at St. Ives at a cost of £400,000 ; at Lundy Island at a very large but indefinite cost, perhaps £1,500,000 ; at the Mumbles, £400,000 ; and at Swansea at a cost of £750,000, to which the Government is to be asked to contribute £420,000, have all been pressed upon your Committee as suitable for the requirements of this district. Your Committee will not attempt to determine between the relative advantages of these several sites ; but the general tenor of the evidence is of a character to show that at one of these places a harbour should be constructed without further delay." And I sincerely hope that they will not be disappointed ; for St. Ives has been more than once elated by similar recommendations, which in my opinion have sapped the local energies of that district.

This is an interminable subject, and I must have done. I think, however, I have said enough to-night to give some idea of the harbour accommodation in the West ; and, as I hinted at the outset, the whole question resolves itself into the prosaic one of *£ s. d.* And in my opinion the most important recommendation made by the last Committee was "that refuge and shelter should be considered more important than mere facilities of trade ; that fishery harbours, especially when belonging to or promoted on behalf of poor fishermen, should be very favourably considered. On this point, your Committee would refer to the extraordinary recent development of the fisheries at Aberdeen, Peterhead, and Fraserburg, in Scotland ; and at Great Grimsby and Lowestoft, in England," following on. And the consequence of harbour improvement is strong evidence in support of the proposition, that good harbour accommodation provided at suitable sites for the prosecution of our fisheries will in the end surely pay its own

way; and that therefore in such cases the probabilities of prospective revenue deserve to be fully allowed for in judging the value of the security offered for such places by loans.

Table VIII.

LIST OF HARBOURS WEST OF EXETER ON SOUTH COAST.

[*Extract from "Report on Harbour Accommodation, 1884."*]

Number.	Name of Harbour.	Depth in Bar or at Entrance Low-water at Spring-tide.	Remarks.
1	Teignmouth . .	Dry.	
2	Torquay:		
	Inner . .	Dry.	
	Outer . .	8 to 18 feet.	
3	Paignton . .	Dry.	
4	Brixham . .	Dry.	Unfinished breakwater giving shelter; 24 feet at end.
5	Dartmouth . .	30 feet . .	Spacious; entrance between points 220 yards wide.
6	Salcombe . .	6 feet.	
7	Yealm River . .	9 feet . .	10 feet at low-water for three miles inside entrance.
	Plymouth:		
	Cattewater . .		21 feet low-water; 37 feet high-water.
	Sutton Pool . .		6 feet low-water; 22 feet high-water.
	Millbay Pier . .		24 feet low-water.
8	Hamoaze . .		
	Devonport Port . .		At all times.
	Stonehouse . .		At all times.
	Calstock . .		At all times.
9	Port Wrinkle . .	Dry.	
10	Looe . .	Dry.	
11	Polperro . .	Dry.	
12	Fowey . .	7 to 9 feet . .	Good shelter.
13	Par . .	Dry.	
14	Charlestown . .	Dry.	
15	Pentuan . .	Dry.	
16	Mevagissey . .	Dry.	
	St. Mawes . .	Dry.	
	Truro . .		9½ ft. at the quay at high-water spring-tide.
	Penryn . .	Dry.	
17	Falmouth . .	9 to 10 fathoms at entrance to outer harbour.	18 to 22 feet at low-water spring-tide. Vessels of heaviest draught can enter outer harbour at all times of tide. A capacious and secure anchorage.
18	Helford River . .	12 feet on bar . .	Secure anchorage in 4 fathoms inside.
19	Polkerris . .	Dry.	
20	Coverack Cove . .	Dry.	Small pier. Good shelter for fishing boats.
21	Porthleven:		
	Outer . .	6 feet.	
	Inner . .	Dry.	
22	St. Michael's Mt. . .	Dry.	
23	Penzance . .	1 foot on bar.	
24	Newlyn . .	Dry.	
25	Mousehole . .	Dry.	

Spacious.

Second in importance to the provision of safe and ample fishing harbours to the fishing population is the speedy and economical transit of the fish to the great markets of London and the Midland counties. I have here a map, published by the Fisheries Exhibition, designed to show the commerce of the United Kingdom in relation to fish. It shows the relative amount received by the ports and conveyed inland by the various railroads, and is classified in three divisions, the classification being based upon returns presented to the House of Commons in 1882. Ports receiving under 1000 tons of fish annually are printed in the smallest type. Ports receiving over 1000 tons and under 10,000 are printed larger; and ports receiving over 10,000 tons are printed in larger type still; in fact, the largest on the map. Looking at this map, we can see at a glance that the West-Country fisheries depend upon the coasts between Teignmouth on the South Coast, and Appledore on the North. Only three; viz., Brixham, Penzance, and St. Ives, dispatch more than 10,000 tons. Plymouth, as you will notice, is here printed in the smallest type, although I really do not see how this ought to be, if Brixham is included.

Table IX.

NUMBER OF TRAWLERS, PILOT BOATS, AND HOOKERS
BELONGING TO THE PORT OF PLYMOUTH

FOR THE UNDERMENTIONED YEARS.

Year.	Trawlers.	Year.	Trawlers.	Year.	Trawlers.	Year.	Trawlers.
1855	54	1863	70	1871	59	1879	51
1856	47	1864	70	1872	68	1880	54
1857	46	1865	72	1873	69	1881	67
1858	42	1866	61	1874	61	1882	68
1859	67	1867	52	1875	56	1883	70
1860	59	1868	57	1876	51	1884	70
1861	65	1869	62	1877	48	—	—
1862	65	1870	65	1878	51	—	—

PILOT BOATS.—As only a few of the pilot boats visit Sutton Harbour to pay dues, it would be no guide to the number in the Port; but I have made inquiries of an old pilot, and he informs me that the average number during the past twenty years would be 7.

HOOKERS.—It will be tolerably correct if we take the average number of hookers and drift boats belonging to the Port (not including Cawsand) as being 70.

I have here given a return of the trawlers belonging to this port from the year 1855, when they were 54, to the present time, when they are 70. This number has fluctuated upwards and downwards. So far back as 1865 there were actually 72 trawlers, two more than at present, showing that at all events the trawling industry has not made any advance. I have ascertained from the best sources that the fish landed at Plymouth for the past four years has averaged 4000 tons per annum, which, upon calculation that the average price is £18 per ton, gives the annual value at £72,000. This does not include pilchards, say 500 tons annually, which we from some strange reason send into Cornwall for curing and shipment to the Mediterranean, and which realize in Plymouth about £15 per ton. This gives us a total of £79,500 as the annual value at Plymouth of the fish exported. The produce of fish at Plymouth has been nearly equal for the years 1880, 1881, 1882, and 1883; 75 per cent. more than in 1876 and 1877; and 50 per cent. more than in the year 1879.

I find it given in evidence that the corresponding figure for Brixham is from £52,000 to £57,000 worth of fish exported annually. No estimate has been given of the Penzance output, but the capital value of the fleet working that port is stated to be £200,000, besides the produce of fifty or sixty East-Country boats for a certain portion of the year. This represents an annual output of about £144,000. The capital invested in the boats at St. Ives is given as £176,000, on an annual output of about the same as Penzance. You can thus see that the carriage of this vast quantity of food is an item of the first importance in the receipts of railway companies, and its quick dispatch a matter of vital interest to the county. Up to now there has existed a rigidity about the railway rates for fish, which operates prejudicially to the welfare of the public as well as to the fisherman. In this way the fish rates are now fixed, but it is well known that no commodity varies more or depreciates quicker than fish. If the catches are great, it not unfrequently happens that it is better to cart the fish on to the land for manure than send it to the market—this, with so rich, nutritive, and necessary a food for our towns' populations, ought not to be. It naturally occurs that the mutual principle ought to be introduced in some way, if it would tend to equalize and, I might argue, increase the railway receipts

as well as fishermen's incomes. When fish are scarce prices are high, and a small quantity has to be carried; but when overplentiful, many tons are not sent off at all. Adopting this principle, really a sliding scale, is only carrying out the principle already accepted for all rates; viz., that the cost of carriage must be in proportion to the cost of the commodity carried.

CONVERSAZIONE.

(January 8th, 1885.)

For account of the proceedings at this Conversazione, see Report of the Secretaries.

SODA.

SYLLABUS OF LECTURE BY R. OXLAND, P.A.D., F.C.S.

(Read January 15th, 1885.)

PROPERTIES and uses of soda explained and illustrated. In the early part of the present century obtained only from barilla. Le Blanc's process of manufacture from common salt a result of the French Revolution. The manufacture of chlorine a consequence, with an enormous impetus to the production of lead, manganese, sulphur, soap, soda, glass, and other products. The wet process of extracting copper, gold, and silver, an incident of the use of sulphur ores. The substitution of the ammonia process for that of Le Blanc. Will it issue in the manufacture of ammonia from the nitrogen of the atmosphere?

RAISED BEACHES AND SUBMERGED FORESTS.

ABSTRACT OF PAPER BY R. N. WORTH, F.G.S., ETC.

(Read January 22nd, 1885.)

THE Lecturer's remarks with regard to the Raised Beaches and Submerged Forests of the Plymouth area were as follows :

The Hoe Raised Beaches attracted notice more than sixty years ago. The earliest published record of them with which I am acquainted is by the Rev. Richard Hennah, F.G.S., in 1817;¹ and a few years later he summed up his observations in the following words :

"In many parts of the Hoe, on the declivity towards the sea, about fifteen or twenty feet above high-water mark, and in other places also, there is a bed of sand and water-worn pebbles, varying in thickness, from less than a foot to that of two or three, cemented together in layers, which layers, however, are composed of pebbles about the same size . . . strongly indicating that this was, at a remote period, the level of the sea."²

That Mr. Hennah was the discoverer of this Beach, first distinctly exposed by the cutting of a road round the Hoe in 1816, is stated by Dr. Edward Moore.³

In 1832 the Beach, as it then appeared, was described by Sir H. de la Beche,⁴ and it is subsequently mentioned by him, in 1839,⁵ as one of those most worthy of observation in the Western Counties, though not then described. In the latter year, however, it was not only described, but figured (in part), by Mr. J. C. Bellamy, as it appeared in the month of May. He states that at the Western Hoe, "at an elevation of *about fifty feet above the present sea*," a "most interesting section" had been exposed, "*about twenty feet in depth*."⁶ He then proceeds :

¹ *Geo. Trans.* 1st Series, vol. iv. p. 412.

² *Succinct Account of the Lime Rocks of Plymouth*, p. 58.

³ *Rep. Brit. Assoc.* (1841) Trans. Secs. p. 62.

⁴ *Geological Manual*. ⁵ *Rep. Dev. Corn. and W. Som.* p. 428.

⁶ *Natural Hist. of S. Devon*, pp. 114-5. The italics are Mr. Bellamy's.

"The entire body of the beach rested on *smoothened* rock ; it *sloped* very gently seawards, that is to say, southwards, and had *no inclination to dip east or west*, as if the upheaving force had tilted it to one of those points. The mass consisted of *thin beds or layers*, from one to four or five inches thick, *regularly superposed or stratified*, and varying most systematically *from extremely fine sand to tolerable-sized pebbles*, the several sorts *never appearing to exchange position*, but keeping uniformly to those beds to which they belonged in regard of size. Each layer formed a *solid* cake, increasing in compactness towards the centre of its depth. The layers also were greatly cemented together ; but not so firmly as were the components of each distinctive stratum. The *top differed from the rest*, in being several feet thick, and in being composed of sand of uniform size, and in great measure loose or incoherent."

We are fortunately enabled to supplement this description from Dr. Moore's paper already cited, which deals with the Beach at practically the same date. The abstract of his paper states:¹

"The raised beach . . . has lately, by the extension of the quarry near which it was situated, been almost entirely removed. . . . It was ascertained to occupy a depression in the face of the limestone cliff, 100 feet wide and forty deep; its base is thirty-five feet above the present sea at high-water spring tides; it runs upwards and backwards twenty feet, inclining inwards with the slope of the rock, and is covered by ten feet of gravel, thus making its entire elevation sixty-five feet above the present sea level. It is composed of fragments of rocks of the neighbouring shore, such as limestone, slate, red sandstone, and reddish porphyry, together with quantities of granitic sand, which is arranged in consolidated horizontal layers or false bedding, with intervals of loose sand ; a few shells (*Patella* and *Buccinum*) have been found in it ; and recently on its upper part, ten feet below the surface of the present soil, were discovered bones and teeth of the elephant, rhinoceros, bear, horse, and deer ;² also caudal vertebrae of the whale, and the lower valve of a large oyster."

For some forty years from the date of this paper the "Raised Beach on the Hoe" was almost a matter of pure history. On the

¹ *Rep. Brit. Assoc.* (1841) Trans. Sec. pp. 62-3.

² These had nothing to do with the beach, but were simply *on* it. They were very fragile, and belonged to a deposit of the cave era. The bones of the whale, on the contrary, were water-worn.

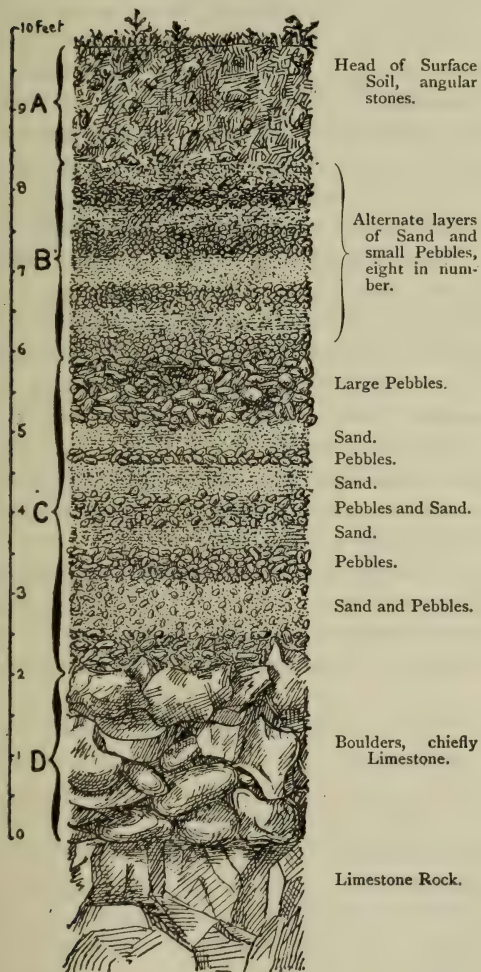
west it had been wholly destroyed by quarrying ; on the east, with the exception of a few insignificant fragments on the verge of the cliffs, what remained was hidden by the turf. In June last, however, alterations in the road at the junction of the two divisions of the Hoe caused the hill to be cut back several feet. As a result, not only was the Raised Beach again exposed, but more effectively than at any previous time. Fortunately for the interests of science the workmen were under the direction of Messrs. Harris, Bulteel, and Co., of the Naval Bank ; and Captain Daubeny not only at once recognized the importance of the discovery, but afforded every facility for development and examination. In its main features the new exposure fully bore out the accounts of Mr. Bellamy and Dr. Moore, but showed that on several points their descriptions required supplement and emendation.

At its most perfect exposure the Beach was 8 ft. 6 in. in thickness, varying but slightly over a section length of half a dozen yards. When first opened upon its top was 40 feet above the highest point of the modern beach ; but as it ascended with an easy slope back into the hill, when the cutting was finished it had been traced to a point three to four feet higher, and its termination had not been reached. The extreme height above the present beach-level would, therefore, approach 45 to 50 feet.

The section was characterized by four well-marked divisions. At the top, immediately beneath the turf, was a head of earth mixed with rubbly angular stones, 18 inches in thickness (*a*). Next came $2\frac{1}{2}$ feet of sand and very small pebbles in layers, apparently eight in number, fairly equal in thickness, approximately horizontal, commencing with sand and ending with a mixture of the two constituents (*b*). Below this was a series of layers of pebbles and sand alternating, 3 ft. 10 in. in total thickness (*c*). The pebbles did not average more than one to two inches in length ; but many were much smaller, while a few comparatively ranged up to four and five inches in longest diameter. There were nine layers in this series, and, as a rule, the materials were well assorted as to their respective dimensions, and only in three of the larger was there any noteworthy admixture of pebbles and sand. Lastly (*d*), there came a bed of large blocks of stone, chiefly limestone, with rounded edges, clearly waterworn, and ranging in size up to a couple of hundredweight, and even more. This stratum was two feet in thickness, and rested on a shelf of rock which sloped seawards.

SECTION OF HOE RAISED BEACH.

JULY, 1884.*



* I am indebted for this illustration to the courtesy of the Royal Cornwall Geological Society.

The different layers exhibited varying degrees of cohesion. The upper beds, in the main, were crumbly, but consolidated patches were of frequent occurrence. The lower beds were at points so solid that they defied the pick, and had to be broken up by blasting. Here and there the layers of smaller pebbles appeared to have been considerably influenced by pressure, having assumed an aspect of remarkable solidity, in which the individuality was partially lost. The main cause of cohesion was, however, the infiltration of water charged with carbonate of lime from the limestone bluff.

The most remarkable feature of the Beach was the character of its materials. The modern beaches of the Sound area are in the main formed from the rocks immediately contiguous. At the Hoe they are in chief part of the local limestone. Not so this ancient sea margin. Save in the lowest, or boulder bed, limestone was of quite exceptional occurrence. Pebbles of red and grey grit were much more frequent, and fragments of slate occasionally occurred. The predominant constituent was, however, the Triassic trap of Cawsand Bay. This is equally true of the larger pebbles and of the finer material classed as sand. The granitic sand spoken of by Dr. Moore was nowhere visible, and he was probably there in error. There were some granules of quartz, but of no more importance than the quartz pebbles and fragments to be found in every modern beach in the neighbourhood.

Now the only actual beach in the locality that presents any likeness to this ancient beach is that at Cawsand, two miles distant across the Sound, and in constitution the two may be regarded as practically identical. But this fact suggests a somewhat difficult problem.

Undoubtedly the materials of the Raised Beach were carried to the Hoe from Cawsand Bay, round the eastern point of Drake's Island; for a boulder of upwards of 2 cwt., derived from an exposure of peculiar trap rock which occurs only in the island in this immediate locality, was found in the basement bed. What is now the island then formed part of the main peninsula of Mount Edgecumbe. The drift to its eastern end was thus along shore, and easily explicable. But how did the materials cross the channel between the island and the Hoe? It is true the distance is only half a mile, but for a couple of hundred yards the interval is occupied by a portion of the deep water-trough, which reaches from near Mount Batten to Saltash Bridge; and the present low-water depth

here is 15 fathoms. It is quite clear that considerable modifications in the relations of land and sea have taken place since the Raised Beach era.

Among the shells yielded by the Beach are those of whelk, limpet, oyster, cockle, and periwinkle; and a few nodules of umber, evidently the result of limestone decomposition, were mixed with the pebbles.

The points at which Submerged Forests have been recorded in the neighbourhood of Plymouth are Sandycove—a spot now obliterated on the eastern side of Millbay, near the pontoon—and Bovisand. I have been unable to detect any traces of a peat bed or allied deposit elsewhere in Millbay, or in the recent excavations made in what was anciently the Surpool area; but that a forest growth extended up the valley of the Plym is clear. Mr. J. C. Bellamy¹ notes its occurrence in the bed of the Laira; and there is a piece of wood in our Museum dug from this locality at a depth of thirty feet from the surface. What is especially important here is that the same writer records—“A piece of oak *bearing marks of the axe* was taken up some years ago in sinking a shaft in the bed of the Laira, at a considerable depth. It may be seen in my brother’s museum, Plymouth.”²

The Bovisand submerged forest is now mainly represented by a peat bed which extends some distance from the beach up the little valley beneath the soil. Beyond trunks of trees (sometimes seen *in situ* beneath the water after storms) no discoveries of note appear to have been made here; but I have observed in the peat diminutive patches of earthy blue iron ore, or vivianite—phosphate of iron—which curiously enough is also associated with the forest deposits of Pentuan.

Our most interesting local example of submerged forest growth is put upon record for the first time to-night, although discovered some forty years ago.

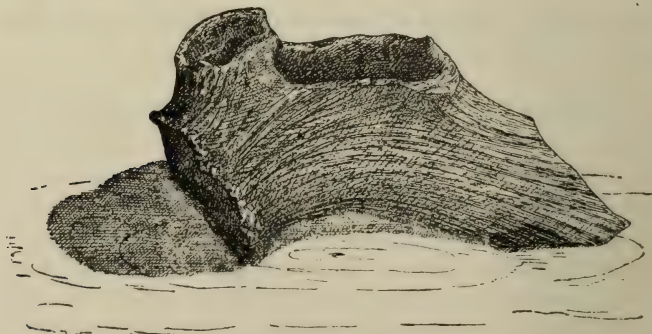
The Museum of our colleague, Mr. Brent, contains a fine implement made of the horn of the red deer, which was found in the course of excavating for the formation of the Keyham Docks. Having seen this as a child, in an exhibition held in connection with the Devonport Mechanics’ Institute, I had some recollection

¹ *Natural Hist. of S. Devon*, p. 108.

² *Ibid*, p. 124.

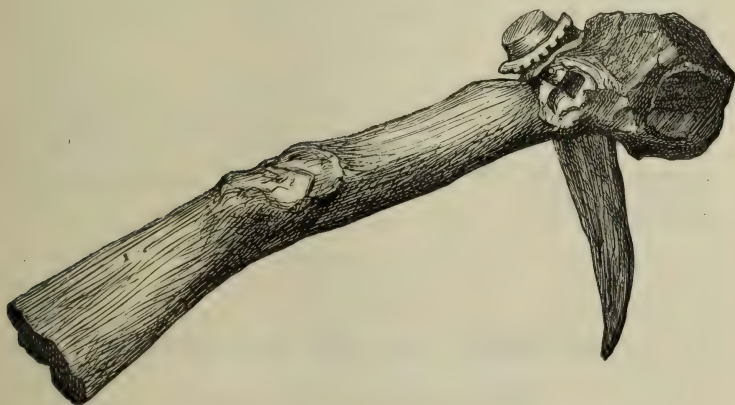
of having heard that other horns and trunks of trees were found at the same time ; and a few weeks since applied to our late townsman, Mr. Alexander Hubbard, by whose firm the excavation for the docks was carried out, for any information he might be able to give. Fortunately he had the information needed ; and he very kindly sent me not only a statement of what he recollected of the facts, but a sketch of the site before the works commenced. The original water-line ran at an angle with the Saltash Road, in such a manner that the whole of what is now the South Basin, and all except the north-eastern corner of the North Basin, were below high-water mark. Where the tide flowed the slate rock of the locality was covered with mud, and at the south-western corner of the South Basin the rock was fifty feet below high-water springs, and buried in mud to the depth of twenty-five feet. At the north-western corner of the North Basin the rock was about eighteen feet below high-water springs, with very little mud covering it ; in fact, at extreme low tides the rock was visible. The mud was of a fatty, alluvial character ; and (I quote here Mr. Hubbard's own words) "there was scarcely any vegetable remains or anything like a peat bed, *except* in one place, where there was nearly one foot of it and an old trunk of a tree blackened, somewhere near the centre, between the two basins." The evidence therefore is ample, that although the extent of the portion left could not have been large, the remains of a true submerged forest in the estuary of the Tamar were discovered when the Keyham Docks were made.

And the chief interest to us here is that this ancient forest bed, like those in Barnstaple, Bridgwater, and Tor Bays, and those



KEYHAM PICK.

at Carnon and Pentuan, yielded unmistakable evidence of the presence of forest man. The deer horn implement to which I refer bears the original label: "Horn found about seven feet below the surface in excavating for the North Basin, Keyham." Its extreme length is eight inches, and its largest circumference the same; while the base of the antler is three inches across. A mortise hole is driven in it $2\frac{1}{8}$ inch long, by $1\frac{1}{8}$ inch wide. The part of the horn which I assume formed the digging part of the implement has broken, but shows signs of subsequent wear. This tool naturally connects itself with the kindred implements found at Torbay and at Carnon. Opinions have differed as to whether we have in it a portion of a pick, or the haft of a celt or stone axe; but I have no doubt myself it is the former. The ancient flint workings at Brandon, in Suffolk, have yielded many examples of the natural deer horn used for digging purposes; the main stem of the antler being the shaft, and a tine the pick proper. Similar implements have been found in the mines of Cornwall; but one unearthed in the Carnon stream works at a depth of forty feet displays a marked advance; for a mortise has been cut in the main shaft of the antler, and a tine inserted in the aperture in such a way as to produce a far stronger and more effective tool than the adaptation of a portion of a horn in its natural state could possibly supply.



CARNON PICK.

Now this is much what was done in the case of the Keyham pick. The more massive portion of the antler has been pierced; but in this case for the reception of the haft, and not of the tine—the complete implement being partly of wood (the shaft) and partly of bone (the head). We have thus what we may call the third stage in the evolution of the pick. First there is the natural antler, as at Brandon; then the mortised and adapted antler, as at Carnon; and lastly, the antler ceases to supply both shaft and prong, and a far more formidable and effective tool is made by turning the antler itself, and not merely a tine, to full account by hafting it with wood.

THE TRINITY CORPORATIONS.

SYLLABUS OF PAPER BY F. J. WEBB, F.G.S.

(Read January 29th, 1885.)

INTRODUCTORY notice of growth of the Naval and Mercantile Marine of this country. Chaucer's *Schipman*. Hull in Chaucer's time. Sketch of the history of the Hull Trinity Corporation. Its constitution. The benefits conferred by the Corporation upon the Mercantile Marine. Sketch of the history of the Newcastle Trinity Corporation. The transference of certain of its functions to other bodies. Sketch of the history of the Leith Trinity Corporation. Its benefit societies. Sketch of Deptford, commonly known as the London Trinity Corporation. Substance of its several charters. Its gradual growth and development, and present position.

PAUPERISM AND ITS PREVENTION.

LECTURE BY REV. CANON BLACKLEY.

(Read February 5th, 1885.)

THE FUNCTION OF GOVERNMENT AND LIMIT OF STATE INTERFERENCE.

SYLLABUS OF PAPER BY REV. W. DICKSON, LL.D.

(Read February 12th, 1885.)

EVILS of over-government, with instances. Proper functions of government: Inspection, revision, national defence, internal police. Real object of government. Greater individualism. Short historical review.

THE DEVELOPMENT OF MODERN IDEAS RELATING TO PROPERTY IN LAND.

SYLLABUS OF PAPER BY C. F. BURNARD.

(Read February 19th, 1885.)

1. A REVIEW of the evils which have grown up with and out of the present and past land laws of this country ; such as (*a*) lessening the productive power of the land, (*b*) the aggregation of land into large estates, (*c*) the extinction of the yeomanry class, (*d*) the divorcement of the labourer from the soil, &c. 2. An examination of the causes which have created and fostered these evils ; such as (*a*) primogeniture, (*b*) entails and settlements, (*c*) enclosure and appropriation of common land, (*d*) the breaking up of small holdings and extinction of the cottier class. 3. Origins of our land laws : (*a*) Old Saxon laws, (*b*) feudal tenures and soccage, &c. 4. Proposed remedies. Conclusion.

ICELAND: ITS LANGUAGE, LITERATURE, AND LEGENDS.

SYLLABUS OF PAPER BY DANIEL SLATER, M.A., PRESIDENT.

(Read February 26th, 1885.)

A FEW reasons why the subject may be of some importance even to an Englishman of the nineteenth century. The physical features of the island, its climate, productions, &c. Summary of its history from the earliest times. A few peculiarities of the Icelandic or Old Norse tongue. The poetic literature: the *Völuspá*, the *Háva-mál*, *Vafðruðnis-mál*, *Grimnis-mál*, *Allvéss-mál*, *Hymis-kviða*, *Ægisdrekka* or *Loka-senna* and other pieces of the Elder Edda, including the Epic cycle of the Volsungs and Niflungs. The prose literature: The Younger Edda. The Sagas, not the ordinary product of the island, but the extraordinary growth of an extraordinary age; compared to the great outburst of dramatic genius in England under Queen Elizabeth. The Saga age divided into three parts: the age of action, the age of Saga-telling, the age of Saga-writing. Sketch of the lives of the three great Saga writers: Ari Ninu Fróði, died 1148; Snorri, died 1241; Sturla, died 1284. Review of some of the Sagas: *Burnt Njal*, the *Eyrbyggja*, the *Landæla*, *Egils-saga*, and the *Minor Islendinga Sögur*. Review of the mythological system of Iceland.

THE EDUCATION OF THE EYE.

SYLLABUS OF PAPER BY H. R. BABB.

(Read March 5th, 1885.)

THE physical construction of the eye. How we see. How artistic sight differs from ordinary sight. That ordinary seeing may be blindness in the artistic sense. The earliest knowledge of the child mainly derived through the organ of sight. The influence of toys. Fröbel's system, and first lessons in form, size, colour, and number. The eye the organ of apprehension in the deaf and dumb. The innocence of the eye in childhood. Drawing should precede writing as writing. The object-lesson a means of calling

out the faculties of observation and admiration. Elementary instruction in drawing should be made an essential part of our national education. The minor decorative arts calculated to lessen the effect of 'over-pressure. Measurement, or judgment of length, an important acquisition. Model drawing and drawing from memory makes accurate observation a necessity.

BRIAN BORU: A TRAGEDY BY J. T. B.¹

SYLLABUS OF PAPER BY REV. S. VINCENT.

(Read March 12th, 1885.)

How I saw the MS. What is tragedy? Mention of Prometheus Bound and Macbeth. Is Brian Boru a worthy attempt at tragedy? The scene is laid in Ireland in the eleventh century. The play has some historical basis. Factions abound, and the land is invaded by the Danes. Brian Boru is at first Chief of Thomond. Mahon, Brian's brother, is King of Munster. Malachy is King of Ireland. The play describes how Brian Boru becomes King of Munster, and finally King of Ireland, and dies in the battle of Clontarf, where he defeats the Danes. An outline of the play, with extracts. Merits of the tragedy.

COMMENTS ON THE FINE ARTS.

SYLLABUS OF PAPER BY GODFREY EVANS.

(Read March 19th, 1885.)

INTRODUCTION. Local indifference to art: reasons assigned and corrected. Some principles of art: technical and æsthetical. Imitation of nature: its possibility and desirability; instances from sculpture and painting. The representation of motion. Truthfulness in art relative, not positive. Works of old masters: why admired. Narrow-mindedness in art to be avoided. A word to students. Consideration of all the arts recommended. The common-place in art. Defects and excuses. Contemplation of pictures. Suggestion for a local art society. On collecting old china and paintings: their manufacture. Notes on the selection and hanging of pictures. Summary. Conclusion.

¹ Published by Longmans, 1879.

THE EXTINCT LAKE OF BOVEY TRACEY.

ABSTRACT OF LECTURE BY W. PENGELLY, F.R.S., F.G.S., ETC.

(Delivered 26th March, 1885.)

THE area known to geologists as the "Bovey Basin" stretches, somewhat curvilinearly, in a S.E. direction from a point upward of a mile W.N.W from the little town of Bovey Tracey—adjacent to the north-eastern angle of Dartmoor—to the village of Kingskerswell—3·5 miles N.W. from Torquay harbour. Its area is about 12 square miles, that is about 15 per cent. larger than Windermere, the largest existing English Lake. The rivers flowing through it are the Teign and its tributaries, the chief of which are the Bovey, the Lemon, and the Aller.

Among the deposits in the Basin the substance locally known as *Bovey Coal*, more generally termed *Lignite*, seems to have been the first to attract scientific attention. As early as 1760 the Rev. Dr. Jeremiah Milles, by publishing a letter entitled "Researches on Bovey Coal" (*Phil. Trans.* li. 534), laid the foundation of the somewhat voluminous literature of the deposits, the results of which may be briefly stated thus:—

1. That the Lignite was of vegetable origin.
2. That the Clays and Sands interstratified with the Lignite were derived from the disintegrated and decomposed granite of Dartmoor.
3. That only one species of fossil (*Folliculites minutulus*) had been found in the Lignite and associated beds.
4. That the Lignite and the interbedded Clays and Sands were certainly *Supracretaceous*, and probably belonged to a very modern *Tertiary* era.

While the first two conclusions met with general acceptance, there was a strong belief that, instead of but one species of fossil, a thorough and systematic investigation would be rewarded with

the discovery of a sufficient number to determine the geological age of the deposit with much greater definiteness than had been yet arrived at; and under this conviction the subject was introduced early in 1860, by Sir Charles Lyell, Dr. Falconer, and myself, to Miss (now the Baroness) Burdett Coutts, who, with her characteristic liberality, furnished the means for the investigation, which was entrusted to me; and, being so fortunate as to secure the service of Mr. Henry Keeping—then of the Isle of Wight, but now of the Woodwardian Museum, Cambridge—who, under my direction and superintendence, excavated the deposits in Windmill Hill Cavern at Brixham, in 1858–9, I was able to begin the work in August 1860, and continue it without intermission to the end of January 1861.

Though investigations were made in the parishes of Abbotskerswell, Bovey Tracey, Kingsteignton, and Wolborough, those in Bovey Tracey need alone be attended to here, being in every respect far the most important, mainly because of the facilities offered in a large open working known as the “Coal Pit,” where Lignite was formerly obtained for the use of an adjoining pottery.

The “Pit,” in form a rude parallelogram, measured about 960×340 feet. Around it were lodged vast accumulations of refuse consisting mainly of valueless Clay and Lignite. Iron pyrites occurred in it in considerable quantities, and spontaneous combustion was formerly common in fresh refuse, especially after much rain. The fire was not generally visible near the surface in the daytime, but its existence was indicated by smoke and a very offensive odour. Cracks, having their sides lined with “Flowers of Sulphur,” traversed the burning mass in various directions, and crystals of “Sulphate of Alumina” were also occasionally formed.

The mode of investigation was that of cutting a series of steps on a large scale by which to descend the face of the artificial cliff forming the southern wall of the Coal Pit from top to bottom, and thereby accomplish the double work of collecting such fossils as were met with, and disclosing the geology of the formation. As we descended, the thickness of each bed and the amount and direction of its *Dip* were carefully measured; a sample, and when necessary more than one, of every bed was taken, each in a separate box; and every important fact, as to the character of the bed and the occurrence or non-occurrence of fossils in it, was carefully noted.

The mean of the several measurements—all very near the average—gave a *Dip* of $12^{\circ}5$ toward S. 35° W., magnetic.

Three such Sections were made in this southern wall—the first near the western end of the Pit, the second 460 feet east of the first, and the third 220 feet still farther east. Confining attention mainly to the first, which, on account of certain local peculiarities was the most important and instructive, the Section disclosed, from the bottom of the Pit upward, 23 beds of Clay alternating with 22 of Lignite. These were followed by a thick bed of Sand, above which were 13 beds of Clay, 9 of Lignite, and 3 of Sand, making a total of 36 beds of Clay, 31 of Lignite, and 4 of Sand. The Clay beds varied from 69 inches to 1 inch in thickness, and the Lignites from 74 inches to 1 inch.

Above these was an accumulation of Clay and Sand 7.5 feet thick, with angular and sub-angular stones varying in size from that of a hen's egg to blocks from 6 to 7 inches in mean diameter; the whole being without any approach to regular or symmetrical arrangement, and overlying the Lignitiferous Series unconformably. This accumulation, locally known as "The Head," occurred in every part of the Basin, and was frequently of greater thickness than at the Pit.

In certain parts of the Basin the "Head" was itself covered with well-marked beds of Clay and Sand without stones, having a total thickness of about 10 feet, and containing, near the bottom of the lowest bed, leaves of the Dwarf Birch (= *Betula nana*, Linn.) and two or three species of Willow (= *Salix*, Linn.)

It cannot be doubted that the deposits disclosed at and near the Pit represented three distinct Formations and Periods—the Lignitiferous Series, the "Head," and the *Betula nana* Clays; and it is probable that these were separated by Periods unrepresented by deposits; thus, and to go no further, the Period of the deposition of the Lignitiferous beds was certainly separated from that of the "Head" by an interval of disturbance, during which the former were all thrown into an inclined position.

Confining attention henceforward to the Lowest Formation—the Lignites with their interstratified Clays and Sands—it is noteworthy that, with the exception of crystals of Felspar, to be noticed again subsequently, there were no stones, large or small; and that all the detrital beds became thinner, and in some cases "thinned

out," toward the east, that is to say with increase of distance from Dartmoor; thus, the lowest and thickest bed of Sand—distinctly seen from end to end of the Pit—was in the most westerly section 133 inches thick, 460 feet farther eastward it measured no more than 19 inches, and 220 feet still farther east it had dwindled to 10 inches, and this attenuation was very gradual and continuous.

Again, three of the beds of the first Section—two of Sand and one of Clay—had "thinned out" before reaching the second Section; and another bed of Clay was in like manner lost in the third and most easterly Section.

Once more, the Clays were much finer and purer in the eastern part of the Basin than in the western.

Further, some of the Sand beds—notably the thick one, mentioned already more than once—contained crystals of Felspar, some of them an inch in length, and with comparatively few traces of abrasion.

In short, there seems no reason to doubt that all the detrital beds were derived from the Dartmoor granite. All the materials composing them were derivable from the granite, and some of them could not have been furnished by any other rock in the district; the thinning and "thinning out" showed distinctly that the transportation was from the west, that is from the immediately adjacent Dartmoor.

Two beds of Clay and thirteen of Lignite were found to be fossiliferous, and the ultimate collection consisted of a very large number of specimens containing a considerable variety of species—all, with the exception of one elytron of a beetle, the remains of Plants. The collection was submitted to the Rev. Professor Oswald Heer, M.D., the eminent palæo-phytologist of Zurich, whose determinations and inferences were printed by the Royal Society of London, preceded by a history of the investigation and a description of the deposits, prepared by myself. (*Phil. Trans.* for 1862, clii. 1019–1086.) The two Papers were at once reprinted, with "Prefatory Remarks," chiefly historical, and published as a Monograph, entitled "On the Lignite Formation of Bovey Tracey, Devonshire."

According to Professor Heer, the Plants represented by the relics found in the Lignite Formation belonged to 50 distinct species, viz. :—3 Fungi, 4 Ferns, 1 Conifer, 4 Monocotyledons, 31 Dicoty-

ledons, and 7 doubtfully identified. Of noteworthy species there were 1 Palm, 1 Sequoia—to which the name *S. couttsiae* was given—1 Oak, 3 Figs, 1 Laurel, 3 Cinnamons, 2 Vines, and 1 Water Lily.

The most prevalent plants were the conifer *Sequoia couttsiae* and the fern *Pecopteris lignitum*; “and their stems,” says Professor Heer, “certainly contribute the greatest amount of lignite.” Some of the rhizomes of the *Pecopteris* were of enormous size and weight.

Of the 50 Bovey species, 19 were certainly, and 5—of somewhat doubtful identification—were probably, species previously well known as having been found in Continental Europe, while the remaining 26 were new to science. 49 of the 50 were new to Britain.

The 19 species just mentioned being characteristic of the era to which geologists have applied the term Miocene—that is to say, the era in which a greater percentage of the fossil Molluscs found in marine beds belonged to species now extinct than to species now living—the Bovey Lignitiferous beds were pronounced to be of Miocene age.

The Miocene formation of Continental Europe being sometimes divided into five Stages—the Cœningian = the uppermost = the most recent of the five, the Helvetian, the Mayencian, the Aquitanian, and the Tongrian = the lowermost = the most ancient; and it being found that, of the 19 species common to Bovey and the Continent, a greater number occurred on the Aquitanian than on any other of the Stages, while the second place was held by the Tongrian; and, further, that of the species common to two or more of the Stages the Aquitanian surpassed all others in the number of localities in which they had been met with, Professor Heer pronounced the Lignitiferous beds of Bovey to be of Lower, not Lowest, Miocene age. It has been recently suggested, however, that, instead of the Miocene, they belong to the Eocene, the next earlier, era. As it may be doubted whether this is anything more than a question of Classification, it seems unnecessary to discuss it here.

As there were no indications that the plants grew where the beds of Lignite occurred, and as the Water Lily afforded positive proof of fresh water, there seemed no doubt that in the Lower Miocene era the Bovey Basin was occupied by an inland Lake; and this harmonized better than any other hypothesis with the alterna-

tions of beds of Clay containing but few traces of Lignite, and beds of Lignite with but a slight admixture of Clay. The investigations of 1860-1, taken with the borings and observations previously made by Mr. John Divett, proprietor of the Coal Pit, showed that the Lake could not have been less than 50 fathoms deep.

It is not a little remarkable that neither fresh water Shells nor Bones of aquatic Vertebrata were met with during the search. Possibly such relics would be found, if at all, near the margins of the Lake, from which the Coal Pit was at a considerable distance.

There has, from time to time, been a considerable amount of speculation respecting the outlet of the Lake. It need scarcely be said that many Lakes have no outlet, their water being kept from redundancy by evaporation alone; and it would be difficult to show that this was not the case in the Lake now under notice. But waiving this; it was contended in 1861 (See *Quart. Journ. Geol. Soc. Lond.* xviii. 9-20, 1862) that the outlet was at Torre-Abbey Sands—the end of the valley from Newton, by way of Kingskerswell, to Torbay. This idea originated, no doubt, in the fact that when an outlet exists it is commonly at one end of the longest axis of the Lake. This, however, is by no means universally the case; for, to go no farther, the outlet of the Lake of Constance is, according to the maps, about 13 miles from the nearest end of its longest axis.

Further, in the valley now under notice the water-shed dividing the drainage into Torbay from that into the Bovey Basin is at present at a considerable height above mean sea-level. There is, moreover, not the slightest trace along the route suggested of such *débris* as the hypothetical stream should have left, while every one who will carefully study the estuary of the Teign will find abundant relics of a river course many feet above the level of the South Devon Railway.

It is contended, however—and this seems to be regarded as the clenching piece of evidence—that there are traces of “very white sandy clay, resembling that of the Bovey deposit” (*Ibid.* p. 17), on the beach near Torre Abbey. There is a considerable amount of Clay there, no doubt; and so there is on the tidal strand, not only in almost every other inlet of Torbay, but in a very great number of the bays and creeks on the coasts of both North and

South Devon and Cornwall. The Clays on Torre Abbey Sands prove nothing, inasmuch as they prove a great deal too much. Moreover, the Clays in our creeks and inlets—which, by the way, instead of being “white,” are at most drab, and not unfrequently blue—are far too modern for the service proposed for them. Instead of being brought down by the overflow-waters of a Miocene Lake, they were unquestionably deposited in Post-Pliocene, indeed in Post-Glacial, times, and were the soil in which grew the Forests now submerged on our tidal strands.

The plants which grew on the slopes surrounding the Bovey Lake—Cinnamons, Evergreen Figs, Laurels, Palms, and Ferns having gigantic rhizomes—have their existing congeners in a sub-tropical climate, such, it cannot be doubted, as prevailed in Devonshire in Miocene times, and are thus calculated to suggest caution when the present climate of any district is regarded as normal.

When, moreover, Miocene plants are found in Disco Island, on the west coast of Greenland, lying between $69^{\circ} 20'$ and $70^{\circ} 30'$ N. lat.; when we learn that among them were two species found also at Bovey (*Sequoia coultssiae* and *Quercus lyelli*); when, to quote Professor Heer, we find that the “splendid evergreen” (*Magnolia ingelefieldi*) “ripened its fruits so far north as on the parallel of 70° ” (*Phil. Trans.* clix., 457, 1869); when also the number, variety, and luxuriance of the Greenland Miocene plants are found to have been such that, had land continued so far, some of them would in all probability have flourished at the Pole itself, the problem of changes of climate is brought prominently into view, but only to be dismissed apparently with the feeling that the time for its solution has not yet arrived.

It seems to be admitted on all hands that the Miocene plants of Europe have their nearest and most numerous existing analogues in North America, and hence arises the question, How was the migration from one area to the other effected? Was there, as some have believed, an Atlantis?—a continent, or an archipelago of large islands, occupying the area of the North Atlantic. There is perhaps nothing unphilosophical in this hypothesis; for since, as geologists state, “the Alps have acquired 4000, and even in some places more than 10,000 feet of their present altitude since the commencement of the Eocene period” (Lyell’s *Principles*, 11th

ed. p. 256, 1872), a Post-Miocene depression might have carried the hypothetical Atlantis into almost abyssmal depths. But an Atlantis is apparently unnecessary and uncalled for. According to Professor Oliver, "A close and very peculiar analogy subsists between the Flora of Tertiary Central Europe and the recent Floras of the American States and of the Japanese region; an analogy much closer and more intimate than is to be traced between the Tertiary and recent Floras of Europe. We find the Tertiary element of the Old World to be intensified towards its extreme eastern margin. . . . This accession of the Tertiary element is rather gradual and not abruptly assumed in the Japan islands only. Although it there attains a maximum, we may trace it from the Mediterranean, Levant, Caucasus, and Persia . . . then along the Himalaya and through China. . . . We learn also that during the Tertiary epoch, counterparts of Central European Miocene genera certainly grew in North-west America. . . . We note further that the present Atlantic Islands Flora affords no substantial evidence of a former direct communication with the main land of the New World. . . . The consideration of these facts leads me to the opinion that botanical evidence does not favour the hypothesis of an Atlantis. — On the other hand, it strongly favours the view that at some period of the Tertiary epoch North-eastern Asia was united to North-western America, perhaps by the line where the Aleutian chain of islands now extends." (*Nat. Hist. Rev.* ii. 164, 1862.)

According to Professor Heer the genus *Sequoia*, so far as is at present known, included seven species, two of them—*S. gigantea* (sometimes termed Wellingtonia) and *S. sempervirens*—are living in California, while the remaining five are fossil species restricted to Tertiary deposits. When arranged in the order of their affinities they stand as below :—

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|--------------------------|-------------------------|----------------------------|
| 1. <i>S. gigantea.</i> | | 5. <i>S. hardtii.</i> |
| 2. <i>S. ehrlichi.</i> | 4. <i>S. couttsiae.</i> | 6. <i>S. langsдорfi.</i> |
| 3. <i>S. sternbergi.</i> | | 7. <i>S. sempervirens.</i> |

the living species being the extremes of all the known forms, and each of them having two of the fossil species closely related to them, while *S. couttsiae*—the Bovey species—is the intermediate species between the two principal types. (*Phil. Trans.* li. 1053.)

As soon as Professor Heer had given his judgment respecting the Era of the Bovey Lignites, I requested Mr. H. Keeping, who had returned to the Isle of Wight, to devote some time on my account to a specified well-defined zone in the Hempstead beds in that Island, and to send me such plant remains as he might meet with. A few weeks brought a good series of specimens, which were at once forwarded to Professor Heer, who identified them as belonging to ten species, all new to the Island, four of them identical with Bovey species, and two new to Science.



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